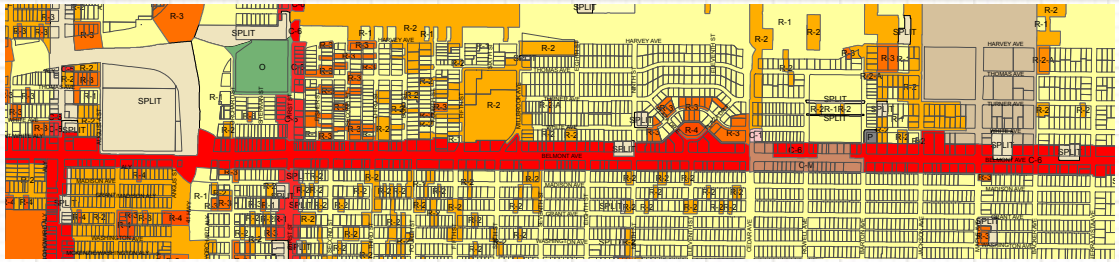
Form-Based Zoning vs Conventional Zoning

Chicago

May 16, 2014



Tony Perez

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What the community wants

But their Zoning ***Doesn't Allow it***

Great at what it wants to prevent

Conventional Zoning

- Emphasis on regulation by use

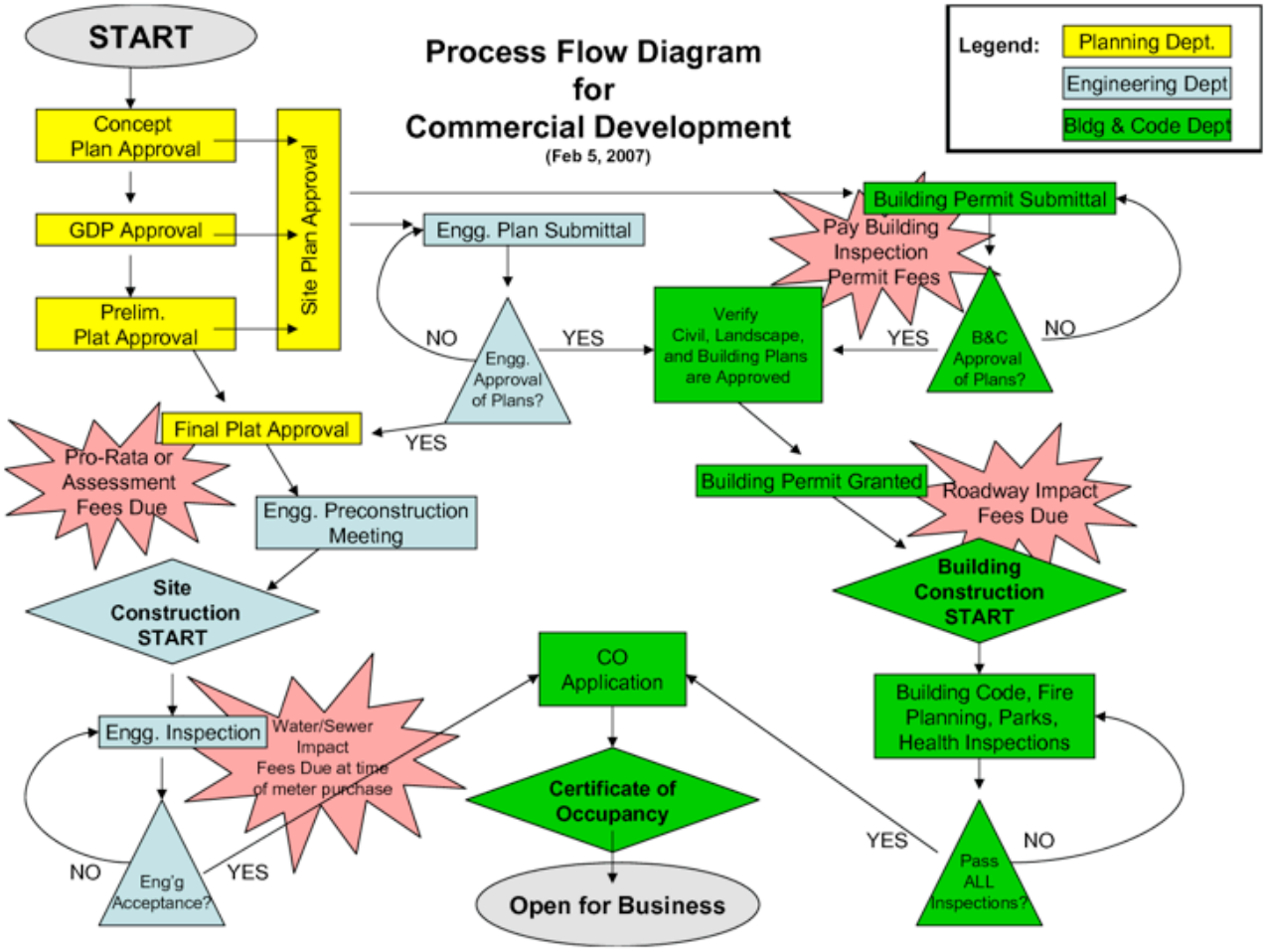
19. Baths, Turkish
25. Boxing arena
28. Chinchillas, retail sales
41. Eleemosynary institutions
42. Embalming business
95. Physical culture institution
109. Potato chip manufacturing
127. Tombstones, retail sales
135. Turkish bath

- Disconnect between land use, urban form, and design
- Exceptions become the rule

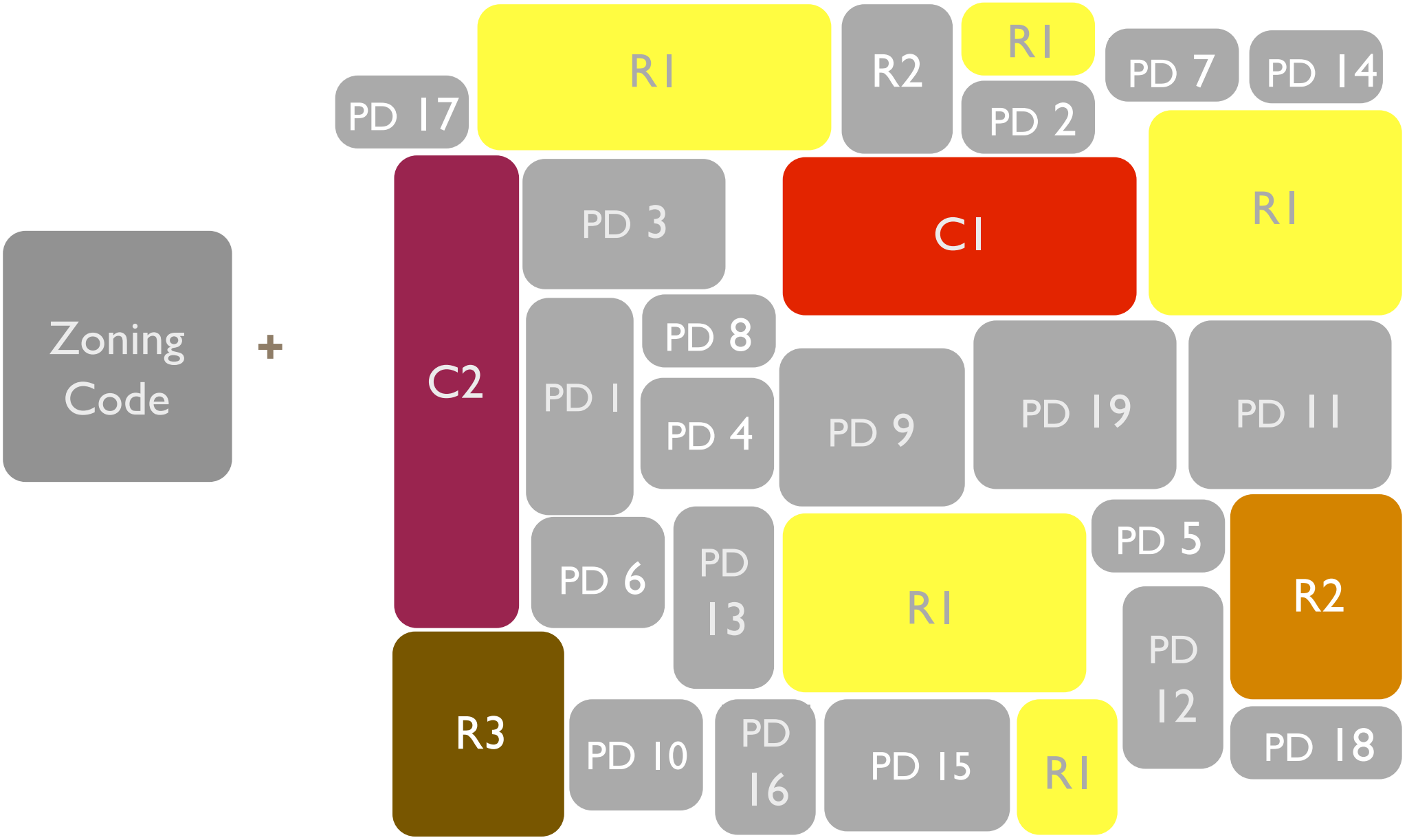
Well, the process will fix it

Zoning Code

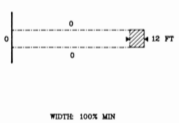
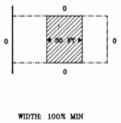
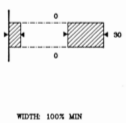
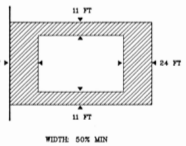
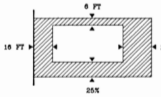
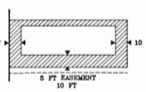
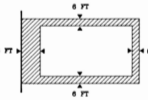
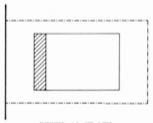
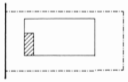
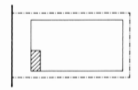
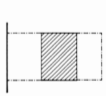
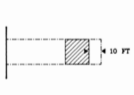
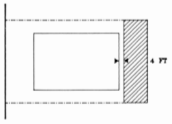
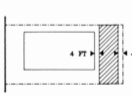
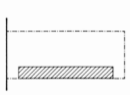
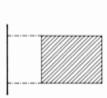
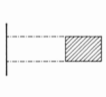
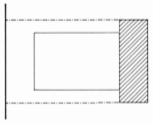
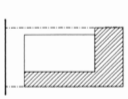
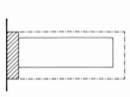
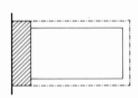
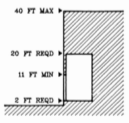
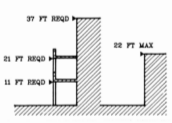
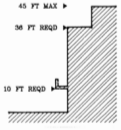
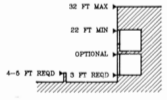
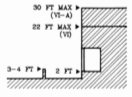
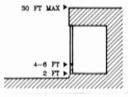
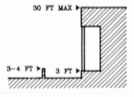
Then



Well, the PD process will fix it

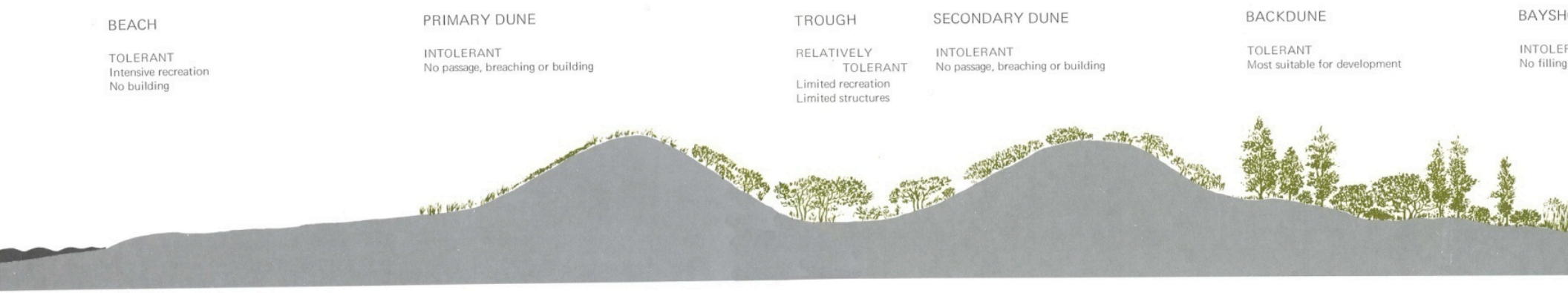


URBAN CODE ★ THE TOWN OF SEASIDE

	TYPE I RESIDENTIAL RETAIL & LODGING	TYPE II RESIDENTIAL RETAIL & OFFICE	TYPE III RESIDENTIAL & WORKSHOP	TYPE IV RESIDENTIAL & LODGING	TYPE V SPECIAL DISTRICT 1. CODE PROVISIONS SHALL BE DEVELOPED IN CONSULTATION WITH THE SEASIDE ADMINISTRATION 2. ARCHITECTS SHALL BE SELECTED BY THE SEASIDE ADMINISTRATION.	TYPE VI RESIDENTIAL	TYPE VII RESIDENTIAL	TYPE VIII RESIDENTIAL	SPECIFICATIONS
YARD AN AREA LEFT FREE OF STRUCTURES MORE THAN 2 FT. IN HEIGHT.	 WIDTH: 100% MIN	 WIDTH: 100% MIN	 WIDTH: 100% MIN	 WIDTH: 50% MIN		 WIDTH: 30% MIN	 WIDTH: 40% MIN	 WIDTH: 50% MIN	1. THE STREET FACADE SHALL EXTEND ALONG THE FRONT YARD LINE A MINIMUM OF THE DESIGNATED PERCENTAGE OF THE LOT WIDTH. 2. THE LARGER OF THE SIDE YARDS SHALL BE WHERE DESIGNATED ON THE TOWN PLAN. 3. CHIMNEYS AND BAY WINDOWS MAY ENCROACH UP TO ONE-HALF THE YARD SPECIFIED. 4. WOOD FENCES SHALL BE BUILT ALONG THE STREET AND FOOTPATH PROPERTY LINES EXCEPT IN TYPES I AND II.
PORCH AN UNGLAZED ROOFED STRUCTURE. **BALCONY** AN UNGLAZED CANTILIVERED STRUCTURE.	 DEPTH: 12 FT MIN WIDTH: 100% MIN	 DEPTH: 10 FT MIN WIDTH: 100% MIN	 DEPTH: 5 FT MAX WIDTH: 40% MIN	 DEPTH: 10 FT MIN WIDTH: 100% MIN		 DEPTH: 8 FT MIN WIDTH: 60% MIN	 DEPTH: 15 FT MIN WIDTH: 30% MIN	 DEPTH: 8 FT MIN WIDTH: 40% MIN	1. THE PORCH OR BALCONY SHALL EXTEND IN WIDTH A MINIMUM OF THE DESIGNATED PERCENTAGE OF THE STREET ARCADE. 2. THE FRONT PORCH OR BALCONY SHALL BE THE MINIMUM DESIGNATED DEPTH. 3. THE WINDOW PROPORTION SHALL BE SQUARE OR VERTICAL. 4. BALCONIES ARE REQUIRED IN TYPE III ONLY.
OUT-BUILDING AN AUXILIARY STRUCTURE LOCATED WITHIN A YARD AREA.		 AREA: 200 SQ FT MAX	 AREA: 420 SQ FT REQD	 AREA: 800 SQ FT MAX		 AREA: 240 SQ FT MAX	 AREA: 200 SQ FT MAX		1. THE FOOTPRINT OF OUTBUILDINGS SHALL NOT EXCEED THE DESIGNATED AREA. 2. OUTBUILDINGS SHALL NOT EXCEED 22' HEIGHT EXCEPT TYPE III WHICH SHALL NOT EXCEED 14 FEET. 3. THE WALLS OF OUTBUILDINGS AT PROPERTY LINES SHALL BE LEFT WINDOW-LESS AND SHALL BE 2 HR FIRE RATED.
PARKING AN OPEN AREA NO LESS THAN 10 FT. BY 20 FT. WITH A MINIMUM 10 FT. WIDE CONTINUOUS ACCESS FROM THE STREET.		 4 REQD	 3 REQD	 1 PER 2 BR. REQD		 1 REQD	 2 REQD	 1 REQD	1. THE SPECIFIED NUMBER OF PARKING SPACES SHALL BE PROVIDED WITHIN THE AREA DESIGNATED. 2. TRUCKS, BOATS, CAMPERS AND TRAILERS, AIRSTREAM TYPES EXCEPTED, SHALL BE PARKED IN REAR YARDS ONLY. 3. GARAGES SHALL FOLLOW THE SPECIFICATIONS OF OUTBUILDINGS.
HEIGHT THE VERTICAL DISTANCE BETWEEN THE AVERAGE ENFRONTING STREET ELEVATION AND A SPECIFIED POINT ON A STRUCTURE.									1. MINIMUM AND MAXIMUM BUILDING HEIGHTS SHALL BE AS DESIGNATED. 2. THERE SHALL NOT BE HEIGHT LIMIT ON STRUCTURES OR PORTIONS OF STRUCTURES WITH A FOOTPRINT OF LESS THAN 215 SQ. FT. 3. THE PRINCIPAL ROOF SHALL BE A SYMMETRICAL GABLE OR HIP WITH A SLOPE OF 6 IN 12. 4. A SHED ROOF SHALL HAVE A PITCH OF 3 IN 12 AND BE PERMITTED ONLY WHEN ATTACHED TO A PRINCIPAL ROOF OR WALL. 5. A FLAT ROOF SHALL BE PERMITTED ONLY AS A HABITABLE DECK ENCLOSED BY A CONTINOUS BALUSTRADE OR PARAPET

21ST OCTOBER 1987

1986



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views of the ocean and the beach, but it could provide a third dune, the equivalent of the Dutch Dreamer.

This backdune could offer protection from winter storms and could prevent the breaching of the sandbar from the bayshore as has happened in the past. In creating works like an artificial dune to support a highway, it is important that the sand be withdrawn from the ocean and not from the bay. The beach is not a very rich environment while the bay is the very richest. As Dr. Stanley Cain, the eminent ecologist, has revealed,* dredging of such rich environments can produce biological deserts.

Now if communities are established there arise the problems of water supply and sewage disposal. First let us consider the matter of water. There are resources of groundwater in the sandbars as we have seen, but the water level must not be lowered so far as will extinguish the stabilizing vegetation. This suggests that withdrawal be distributed among a number of wells. But water from this source will be a limiting factor to growth. Sewage presents another problem. The silts of the bayshore are unsuitable for septic tanks and, moreover, the employment of this technique is certain to pollute the groundwater supply. Both a sewer and a sewage treatment plant will be necessary before development is permitted on the dune.

We now have the broad outlines of an ecological analysis and a planning prescription based upon this understanding. A spinal road could constitute a barrier dune and be located in the backdune area. It could contain all utilities, water, sewer, telephone and electricity and would be the guardian defense against backflooding. At the widest points of the backdune, settlement could be located in communities. Development would be excluded from the vulnerable, narrow sections of the sandbar. The bayshore would, in principle, be left inviolate. The beach would be available for the most intensive recreational use, but without building. Approaches to it would be by bridges across the dunes, which would be prohibited to use. Limited development would be permitted in the trough, determined by groundwater withdrawals and the effect upon vegetation. A positive policy would suggest accelerating the stabilizing processes, both of dune formation and of vegetative growth. To do this the appropriate vegetation for the associations would be planted. Particular attention would be given to marram grasses on dunes and to planting red cedars and pines on the backdune.

In the Netherlands, confronted with a similar situation, it bec
resolve to reclaim
positive policy was
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Shore it would
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e Editor, *Landscape Archi-*
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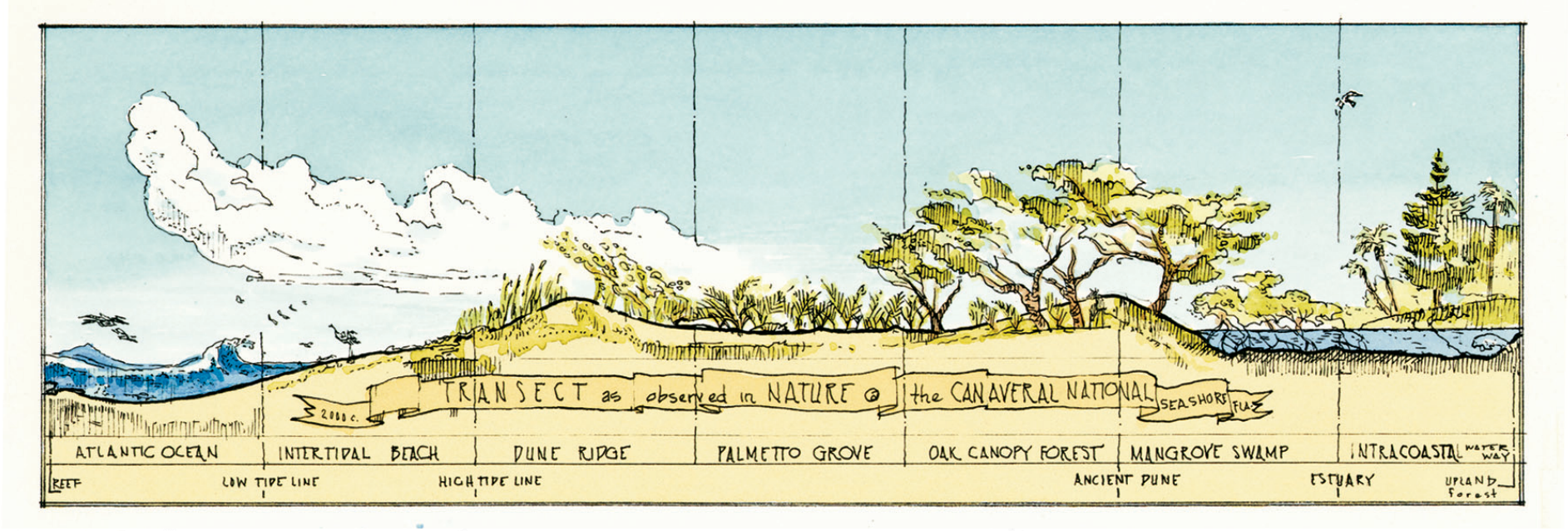
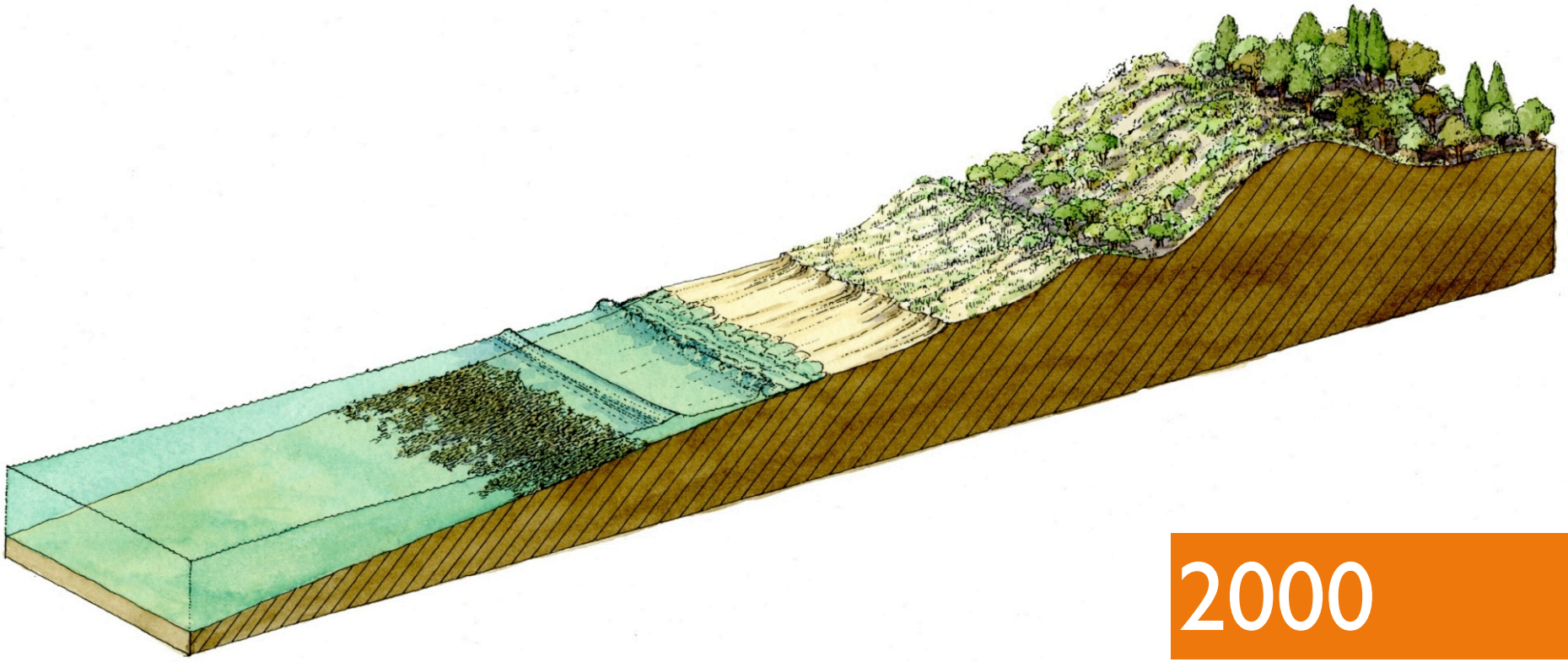
1969





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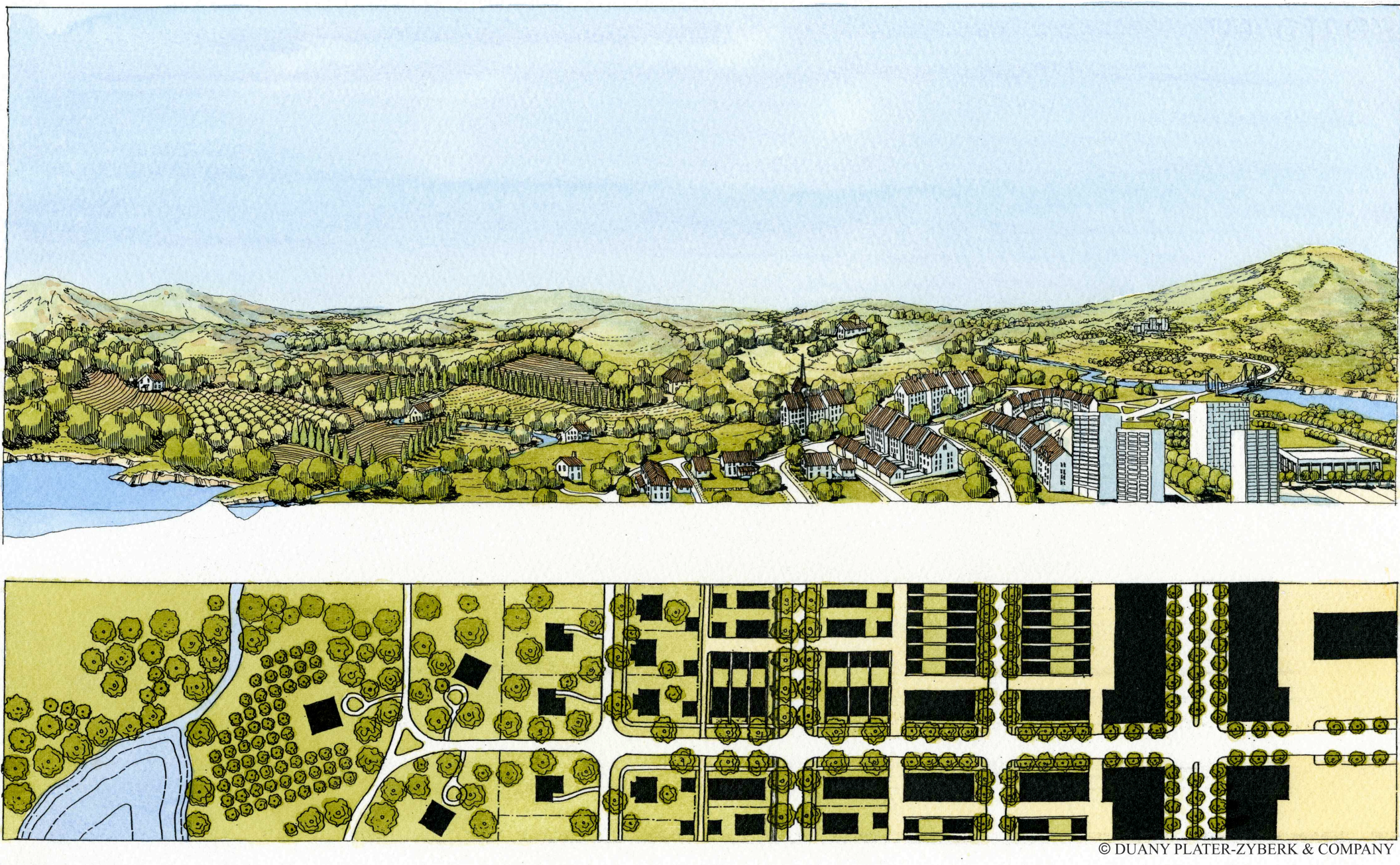
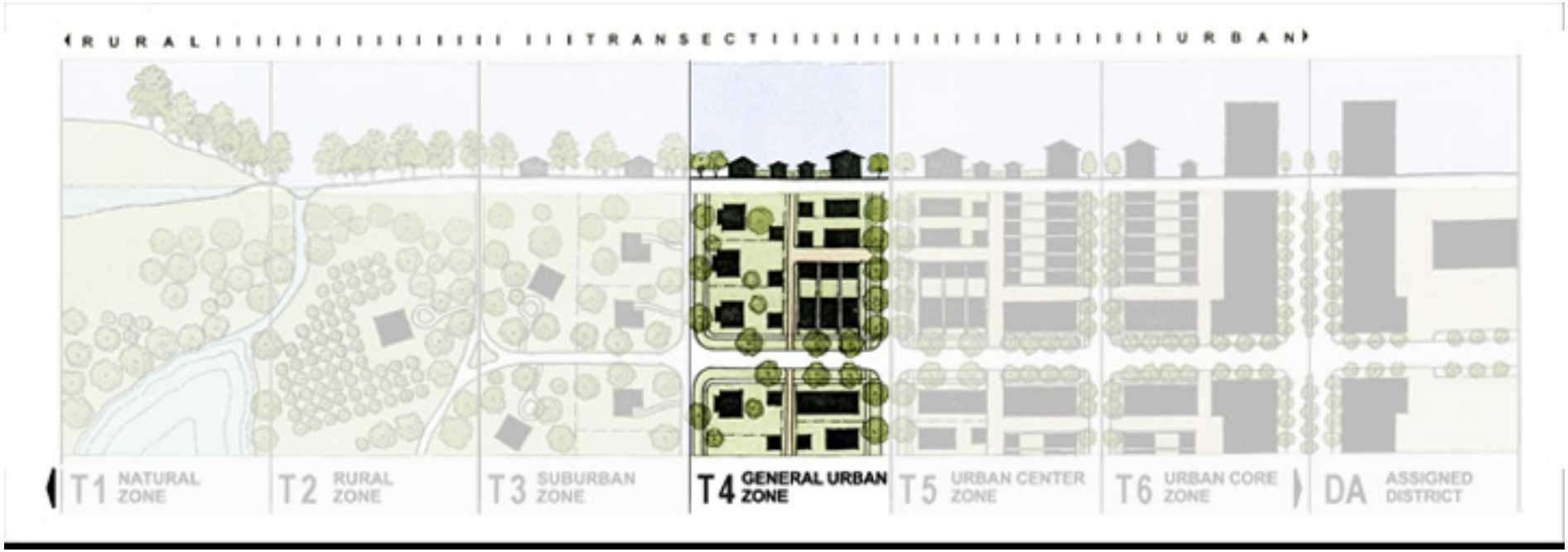
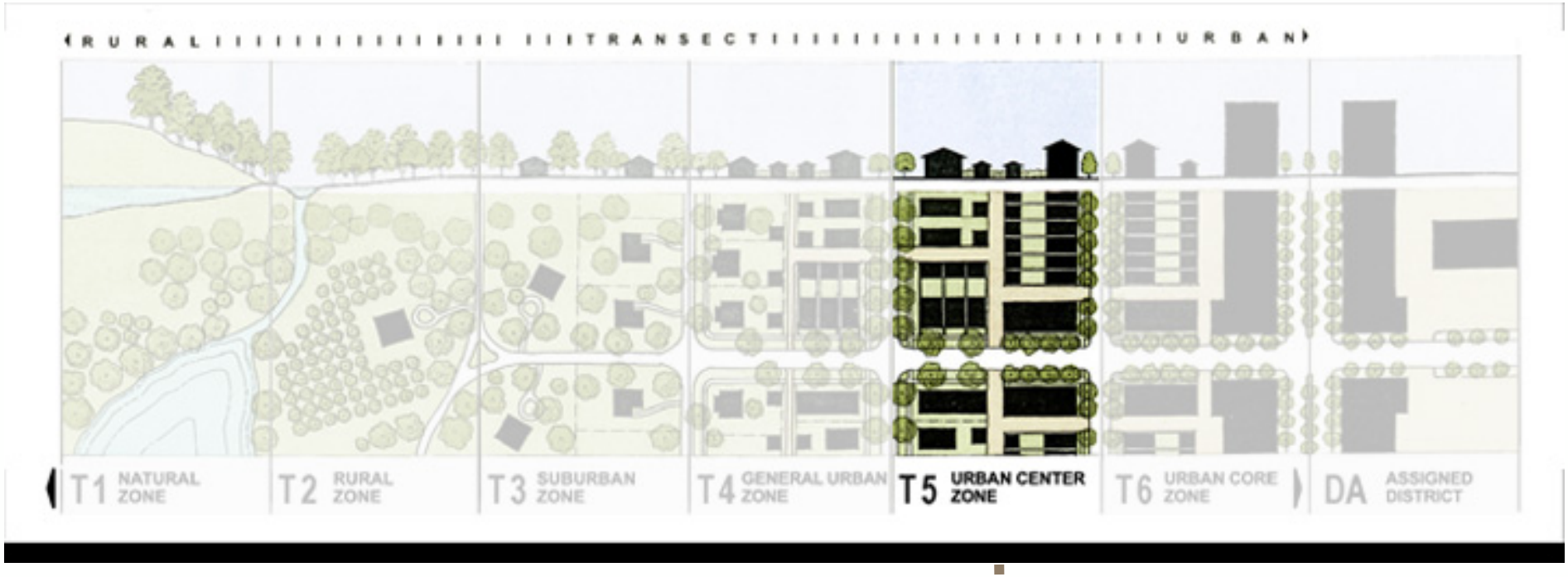
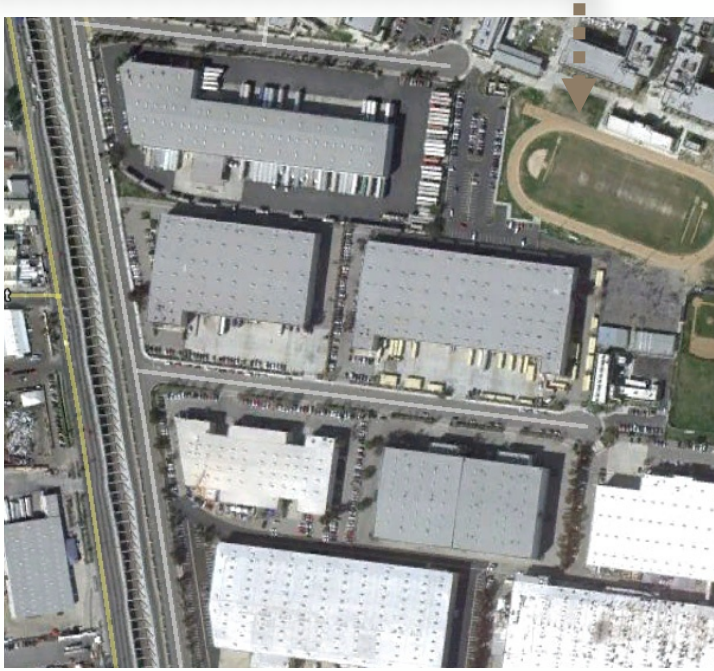


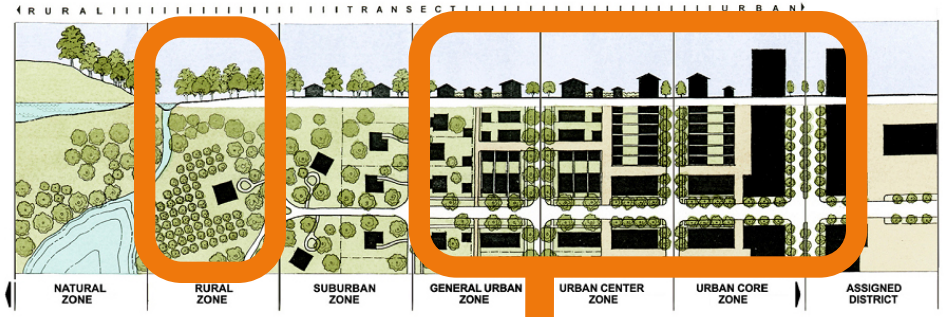
Chicago 2014 Conventional Zoning vs Form-Based Zoning



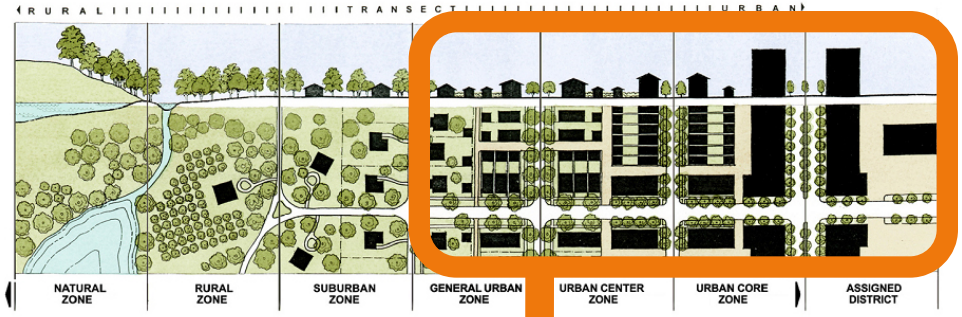




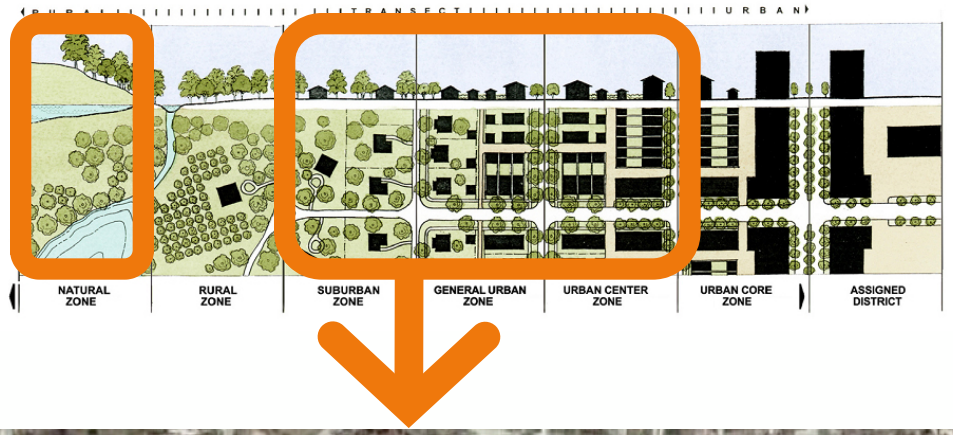
4 Environments

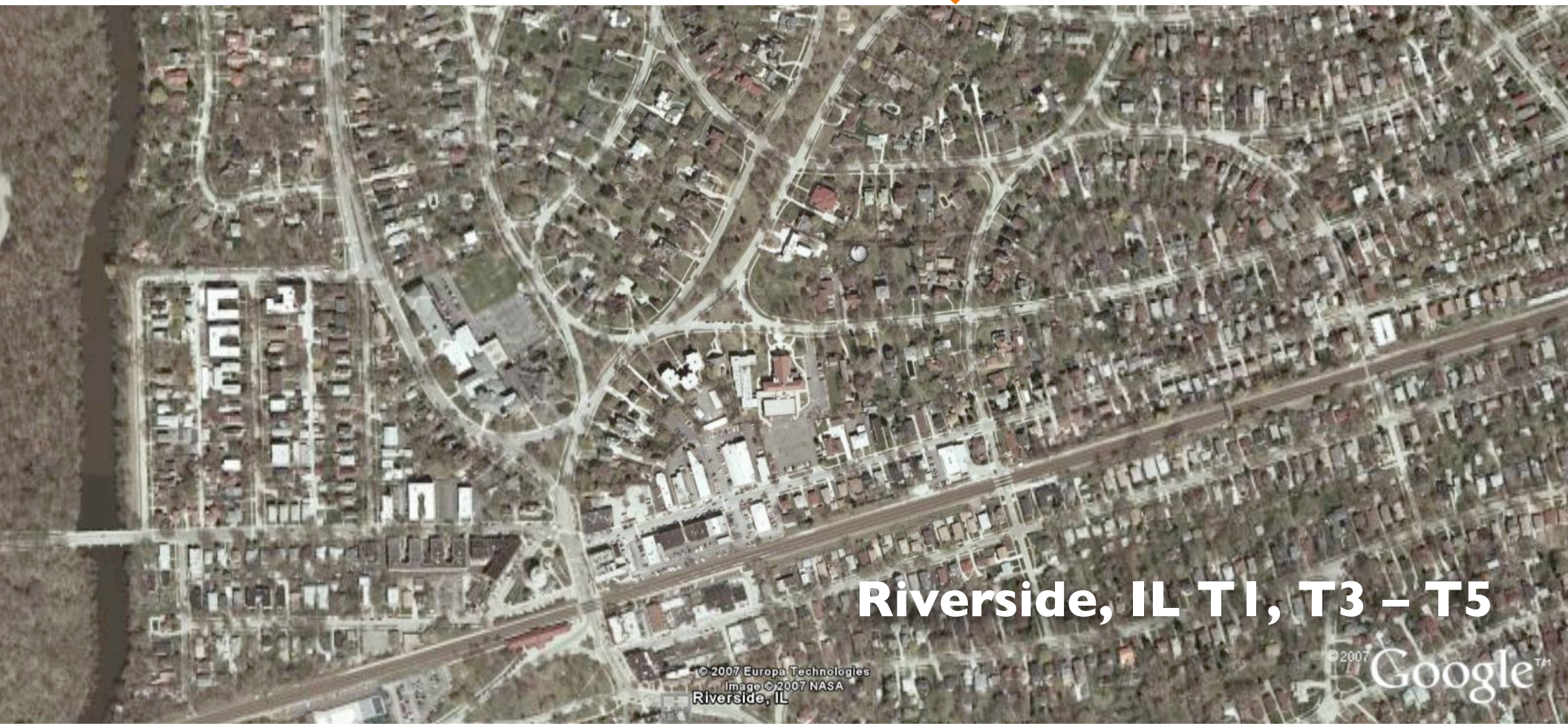


4 Environments

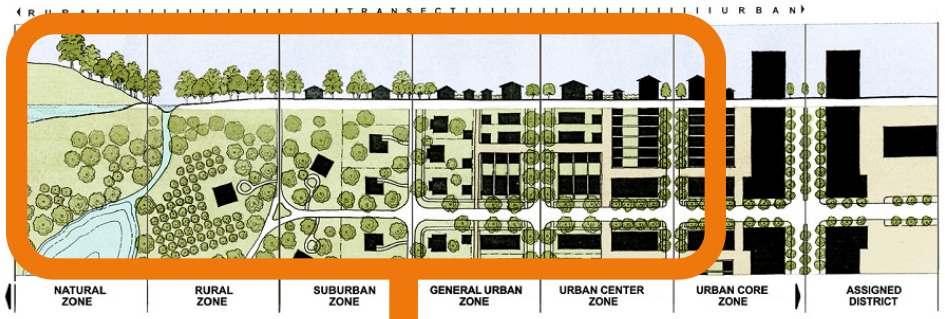


4 Environments





5 Environments



1

But first,

Dictates Architecture

Has to be applied throughout your community

Isn't zoning

Is all about graphics

Improves your golf score

A template that makes you fit your town to it

Only for greenfield development

Makes you insert high density residential

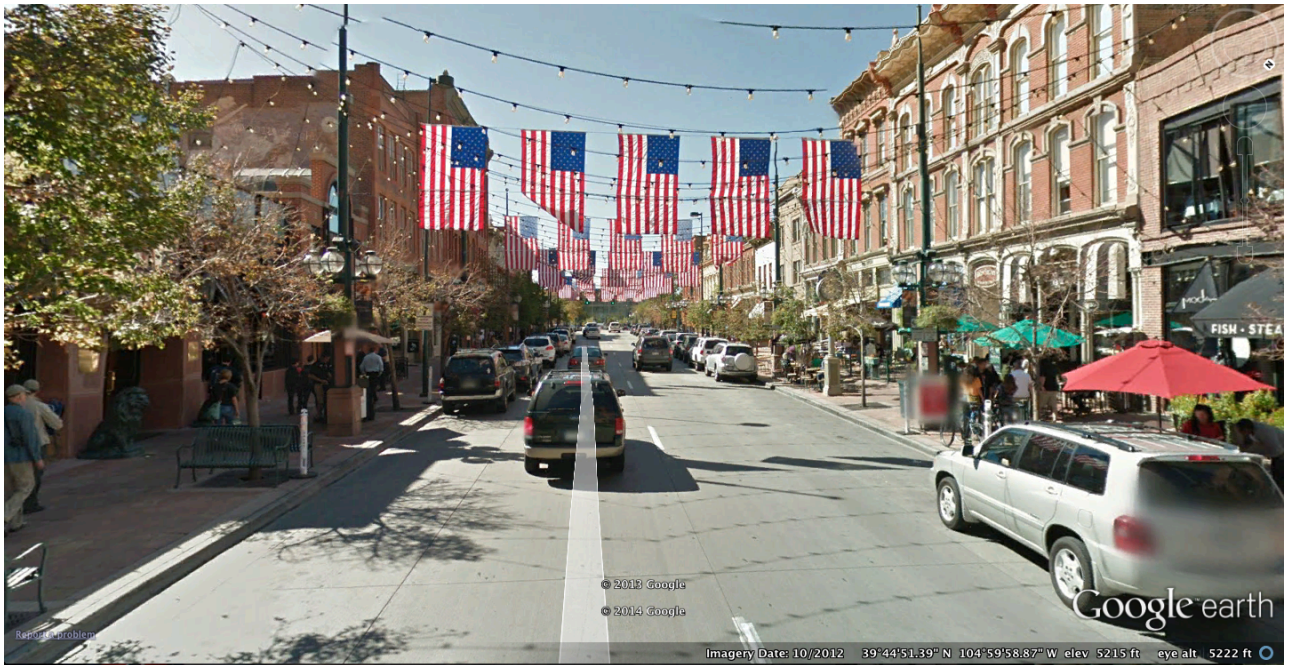
Doesn't address Land Use

Compels mixed-use of everything, everywhere

Requires things you don't need

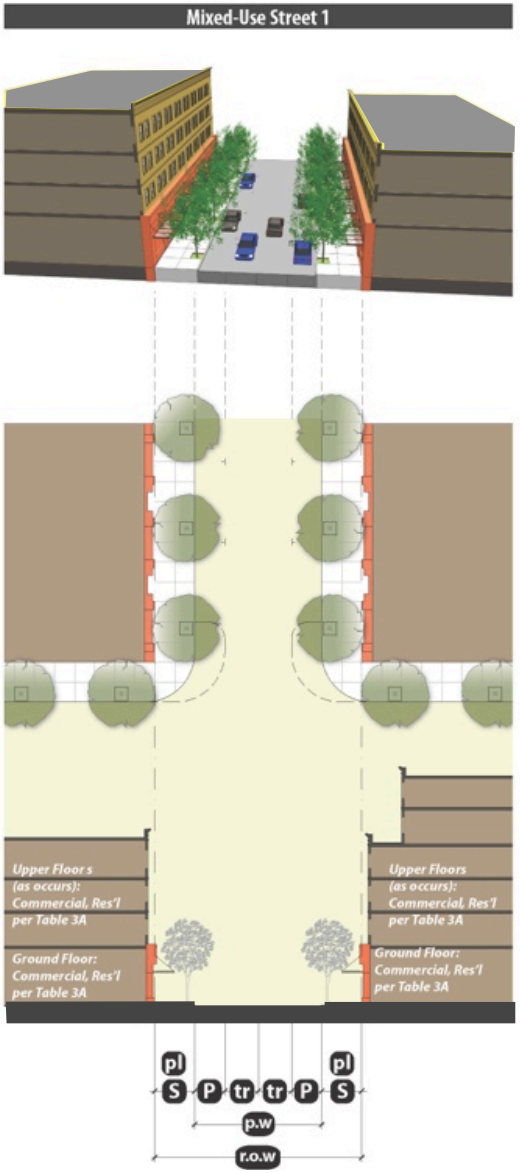
Misperceptions

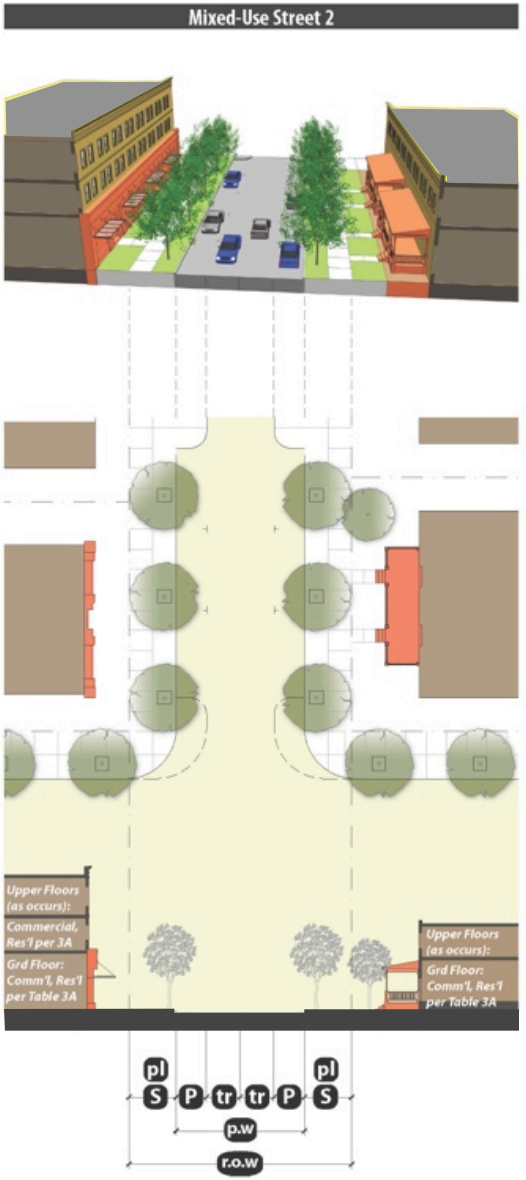
2



The Public Realm

The public realm is very important but not everything





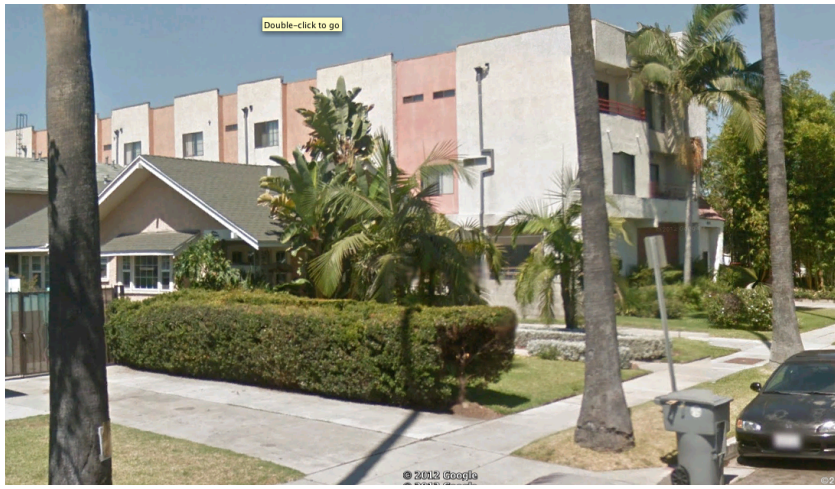
Zoning for the neighborhood

Zoning for the corridor

Two different, adjacent environments that affect each other

Density, Setbacks and Height: Compliant. Really?

3



Size and Scale

Compliance needs to include the Pattern as a factor

What's in common?

Conventional zoning says they're the same They couldn't be more different!

0.60 FAR

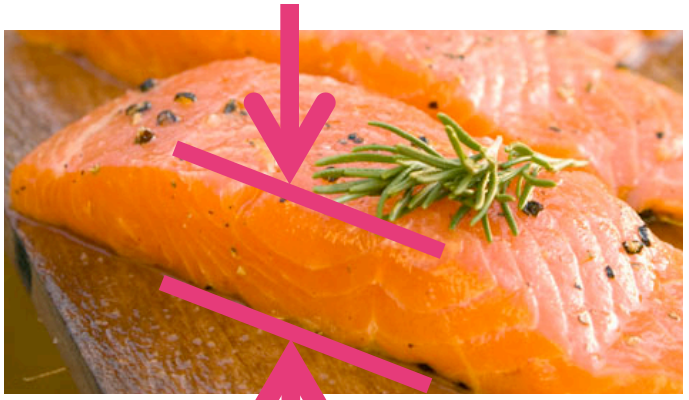
3 at 3 stories and 1 at 12 stories

0.60 FAR

2 story building on 2/3 of site

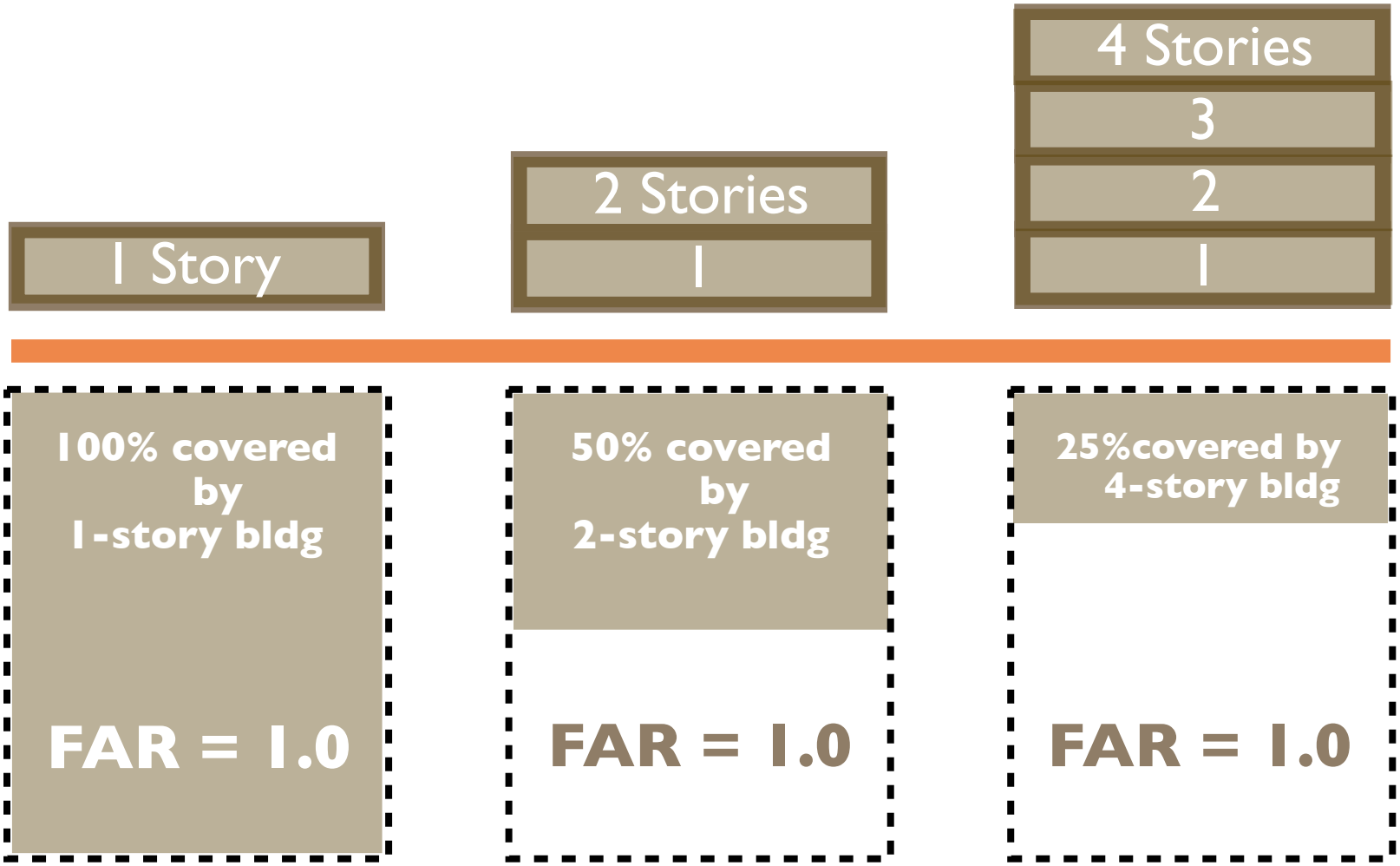
Would you describe other things this way?

max .75 inches tall



oops!

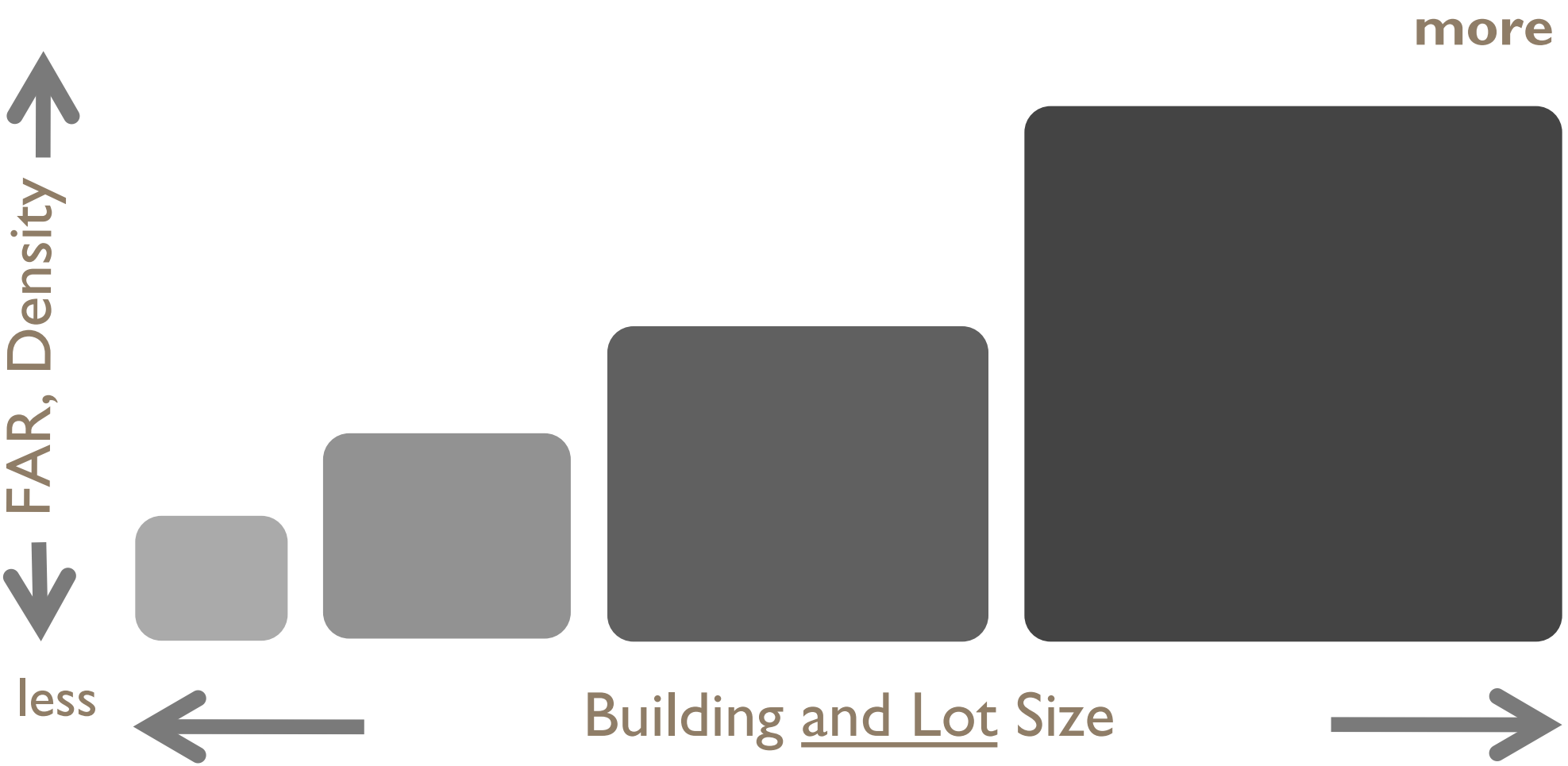
F.A.R. a measuring tool



FAR is a great and fast measuring tool but should not be used to drive design or decision-making: best as a 'resultant' factor

Density: another measuring tool

Realities of FAR and Density

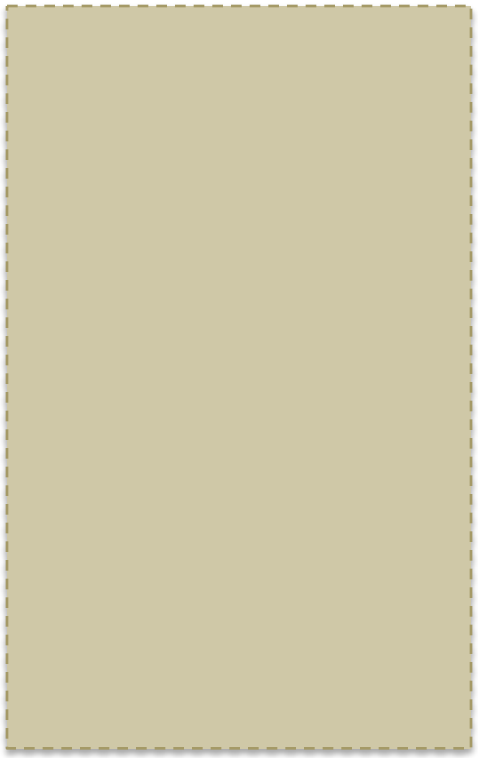


Rules applied by ‘used-based’ or PD zone

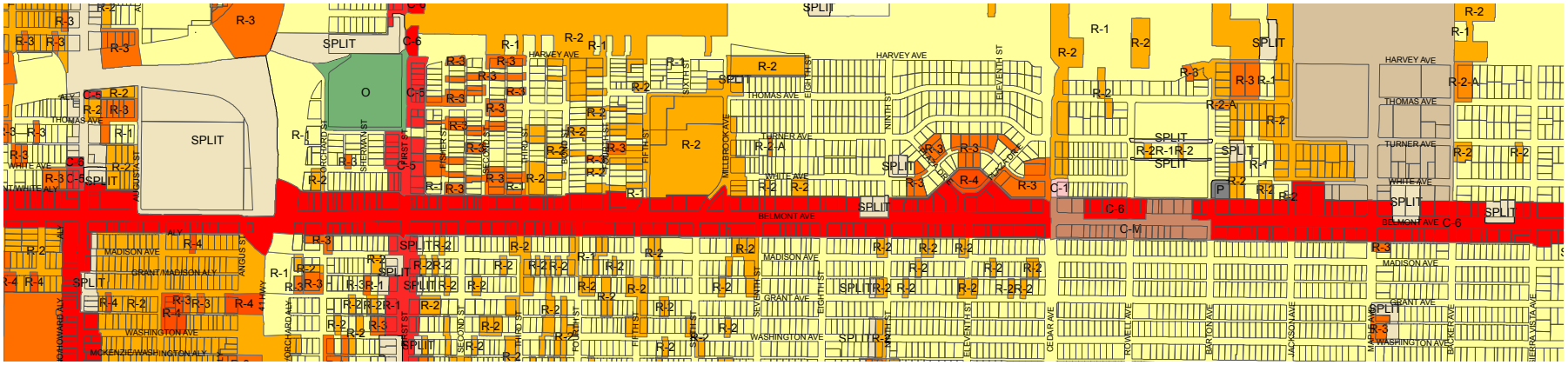
Intended context?

Intended outcomes?

Adjacencies and Compatibility?



overzoning: 2 miles of commercial zoning



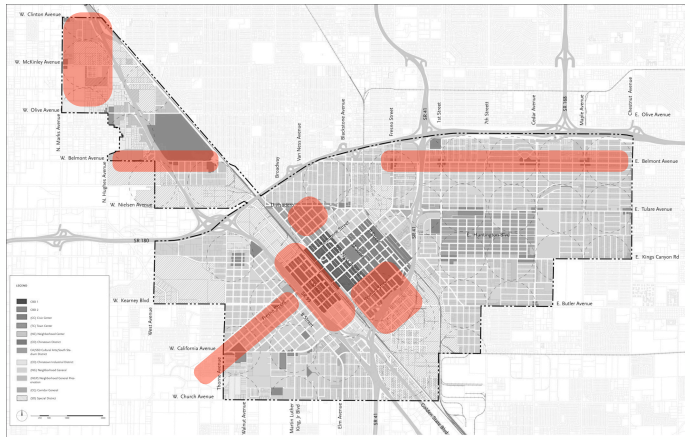
4

Mapping form-based zones: Hierarchy of places

Zoning and Type of Change

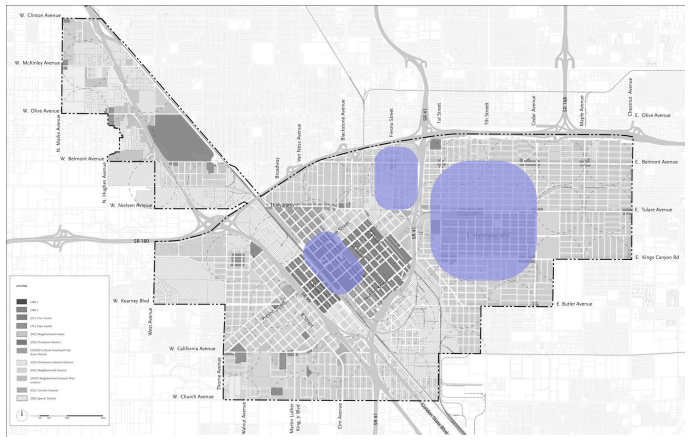
Policy direction for type of change

Regeneration



Targeted Infill

Preservation



Chicago 2014 Conventional Zoning vs Form-Based Zoning

Zoning That Sees the Community

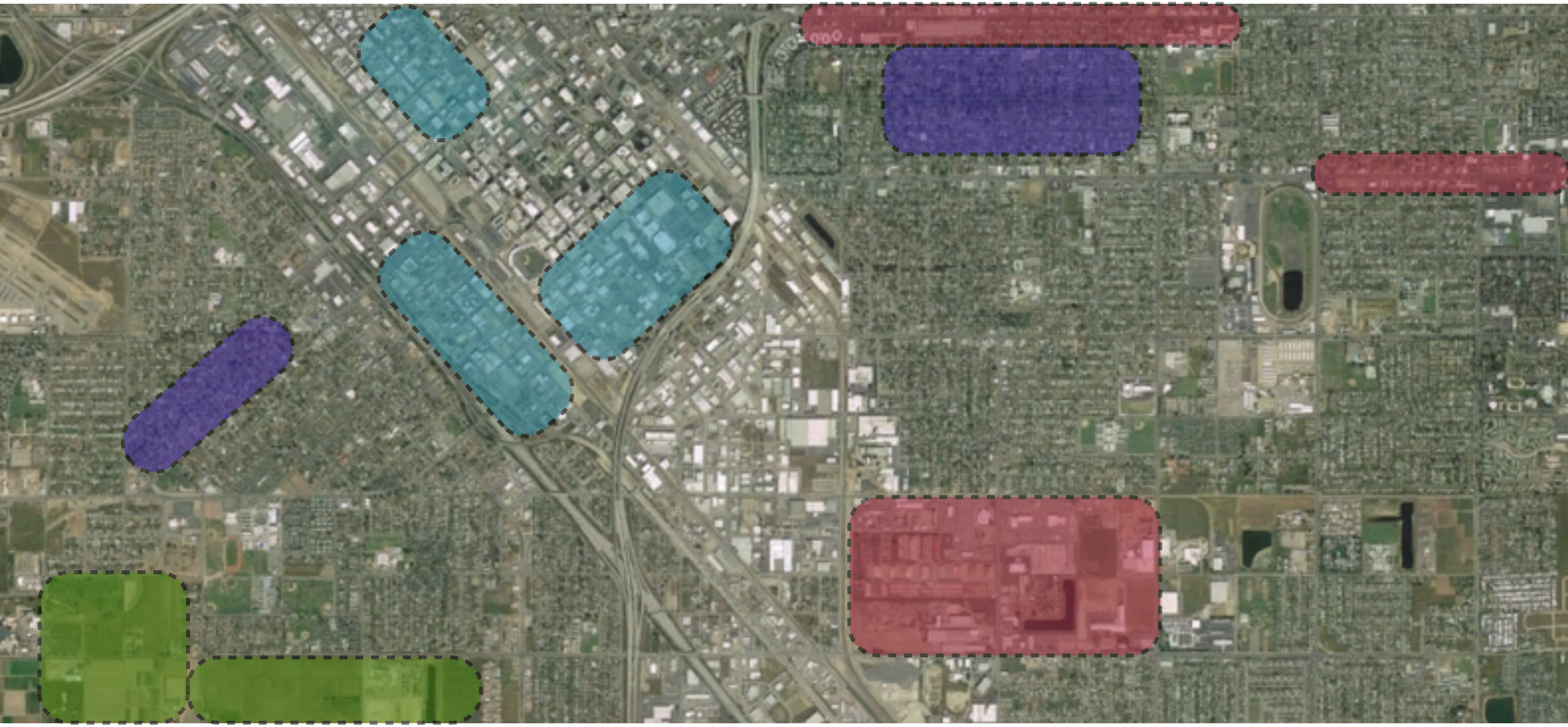
Zoning That Sees the Community

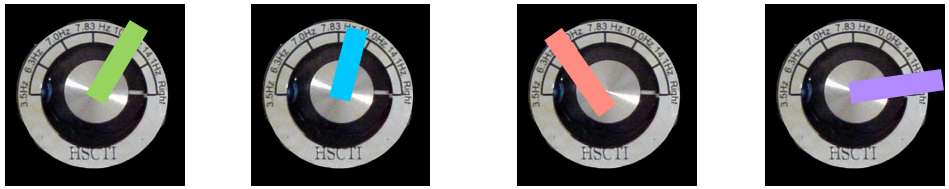
Dialing in on the range of expectations

Example FBC Approaches and Scenarios					
	Degree of Change	**Greenfield Neighborhood**	**Infill Neighborhood**	**Regeneration Corridor**	**Preservation Corridor**
	Level of Expectations	**Basic**	**Moderate**	**Moderate**	**High**
Components	Regulating Plan	X	X	X	X
	Block Standards	X		X	X
	Street Standards	X		X	X
	Streetscape Standards	X	X	X	X
	Civic Space Standards	X			X
	Building Placement Standards	X	X	X	X
	Parking Placement Standards	X	X	X	X
	Building Height Standards	X	X	X	X
	Adjacency / Massing Standards		X	X	X
	Building Type Standards		X		X
	Frontage Type Standards	X	X	X	X
	Land Use Standards	X	X	X	X
	Architectural Style Standards				X
	Signage Standards	X		X	X
	Public Art Standards				X
	Other Standards identified by you	?	?	?	?
	Sustainability is addressed within each relevant code topic				

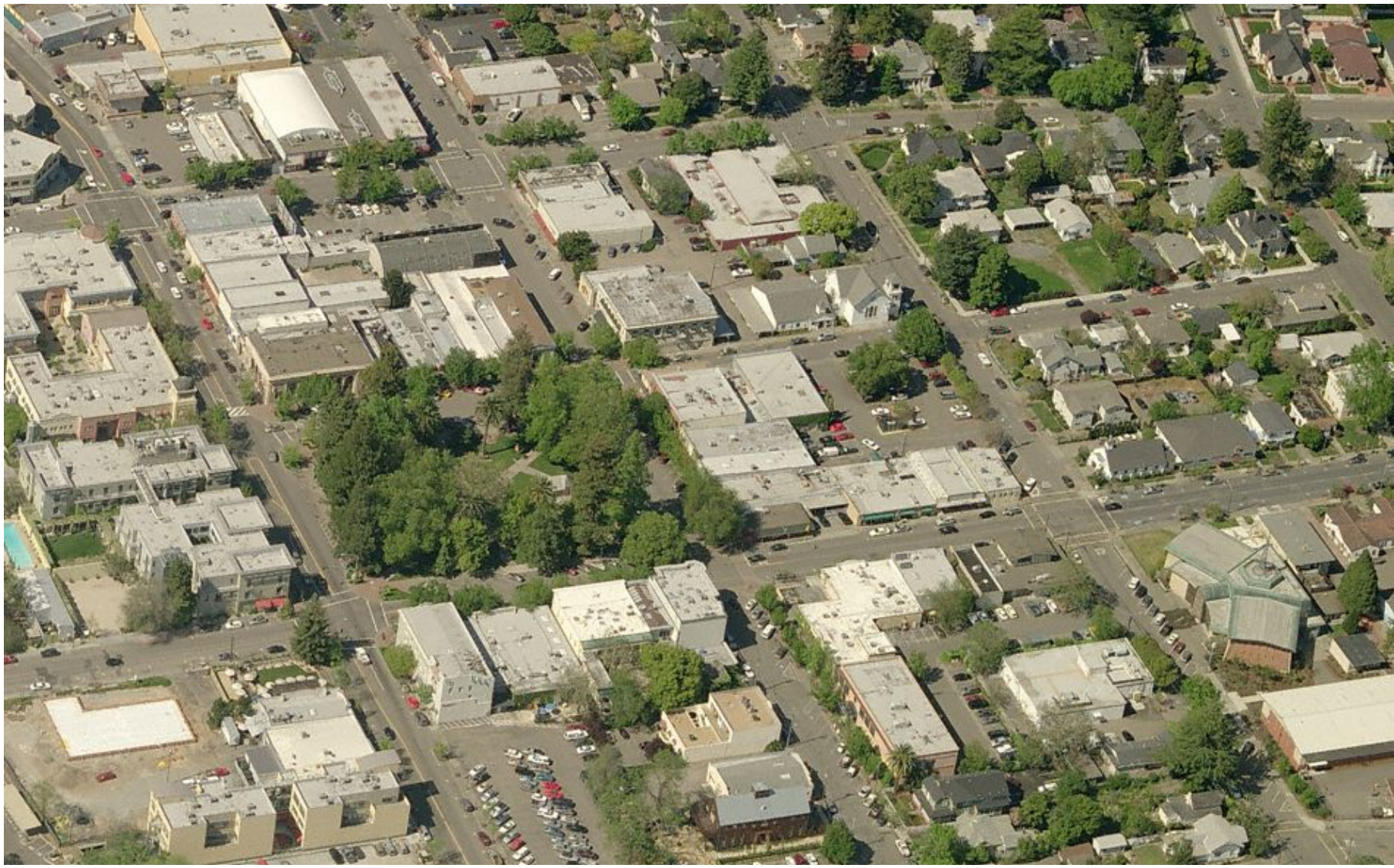



Dialing in on the range of expectations





The built environment: Repeating Patterns

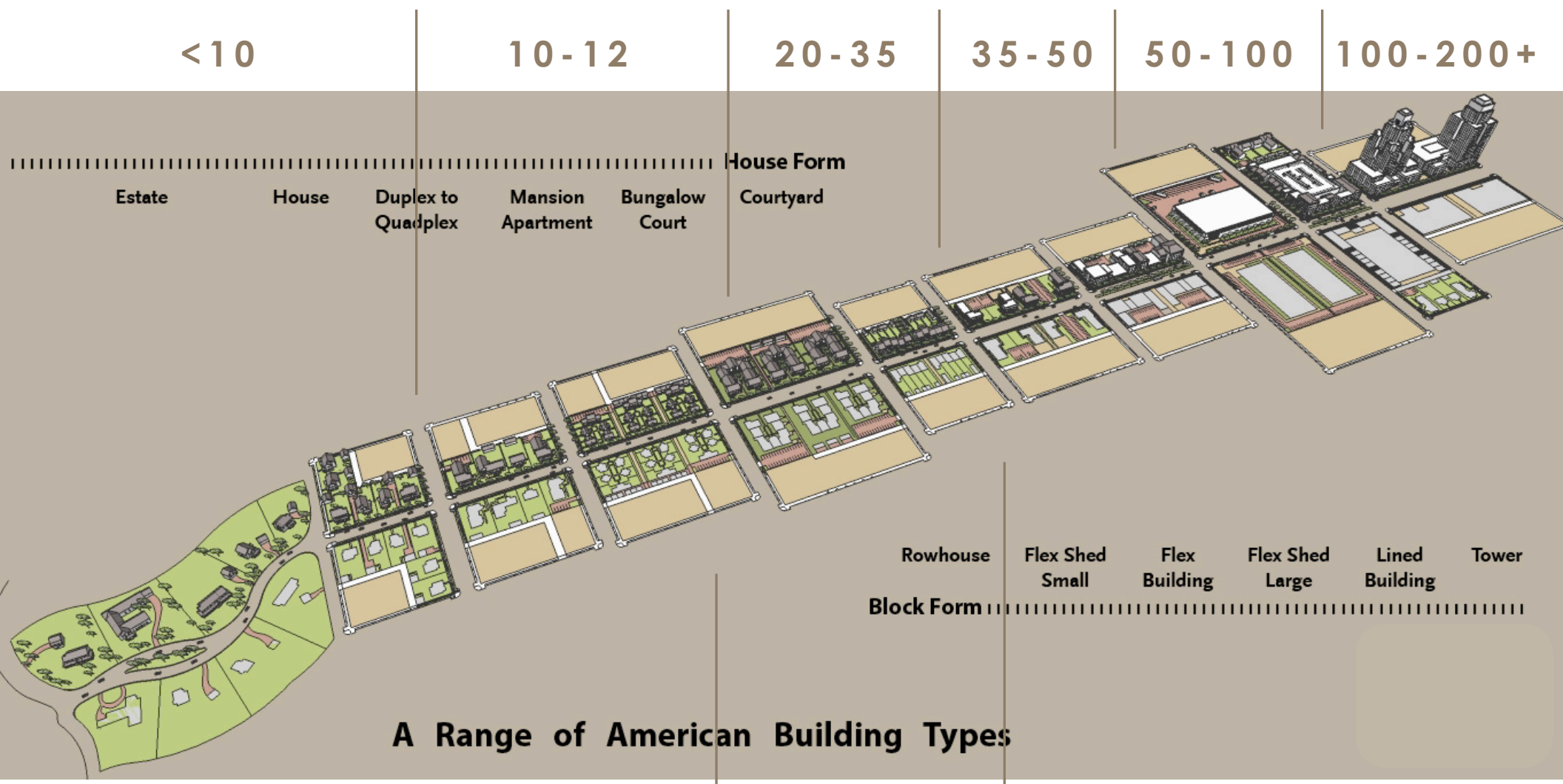


5

Building Types

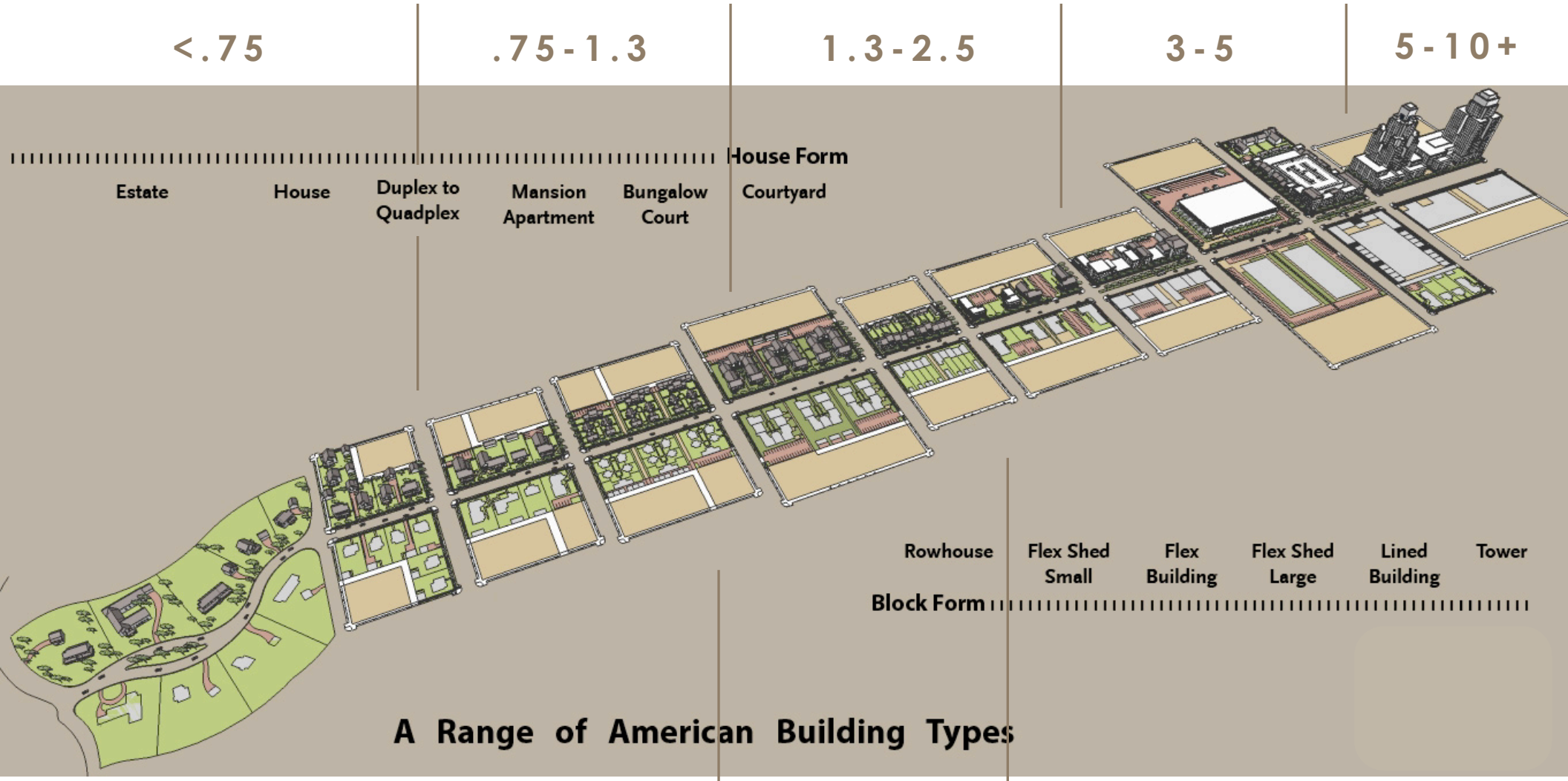
Intrinsic Residential Densities by Type

In Dwelling Units Per Acre (D.U.A.)



HOUSE FORM | TRANSITIONAL | BLOCK FORM

Intrinsic Floor Area Ratio by Type



A Range of American Building Types

HOUSE FORM | TRANSITIONAL | BLOCK FORM

Compatibility through Building Types

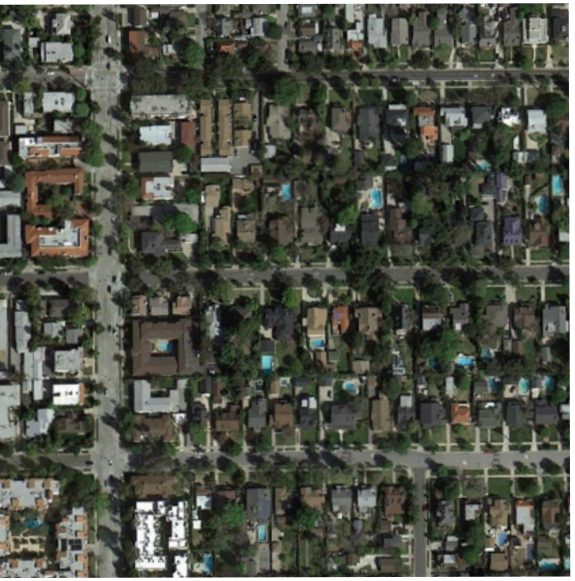
Chunky Infill

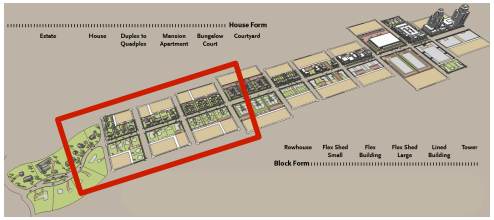
- **Difficult to find large sites**
- **Transitions are larger/bulkier**
- **Less walkable services**
- **Resistance tends to be higher**

Fine-Grained Infill

- **Easier to find smaller sites**
- **Transitions are within context**
- **More walkable services**
- **Resistance tends to be lower**

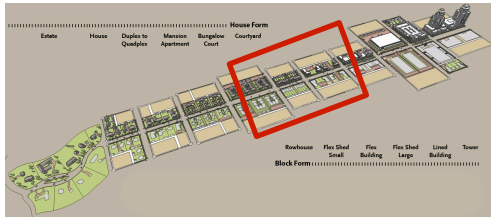
Articulated Neighds and Corridors: Appealing and Sustainable





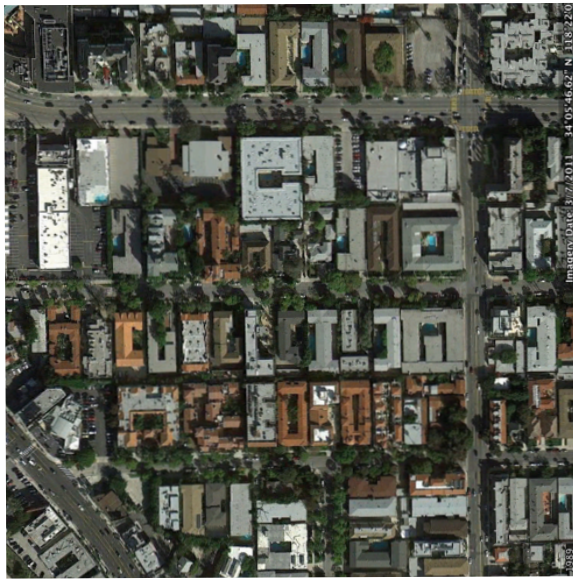
Sub-Urban

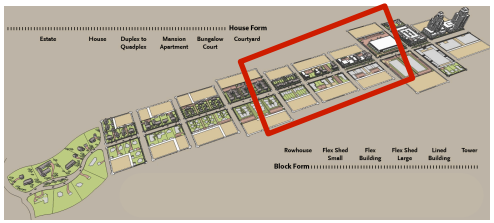
- House Bldgs
- Duplex-Quadplex Bldgs
- Courtyard Bldgs



Urban

- Mansion Apt Bldgs
- Duplex-Quadplex Bldgs
- Courtyard Bldgs
- House Bldgs



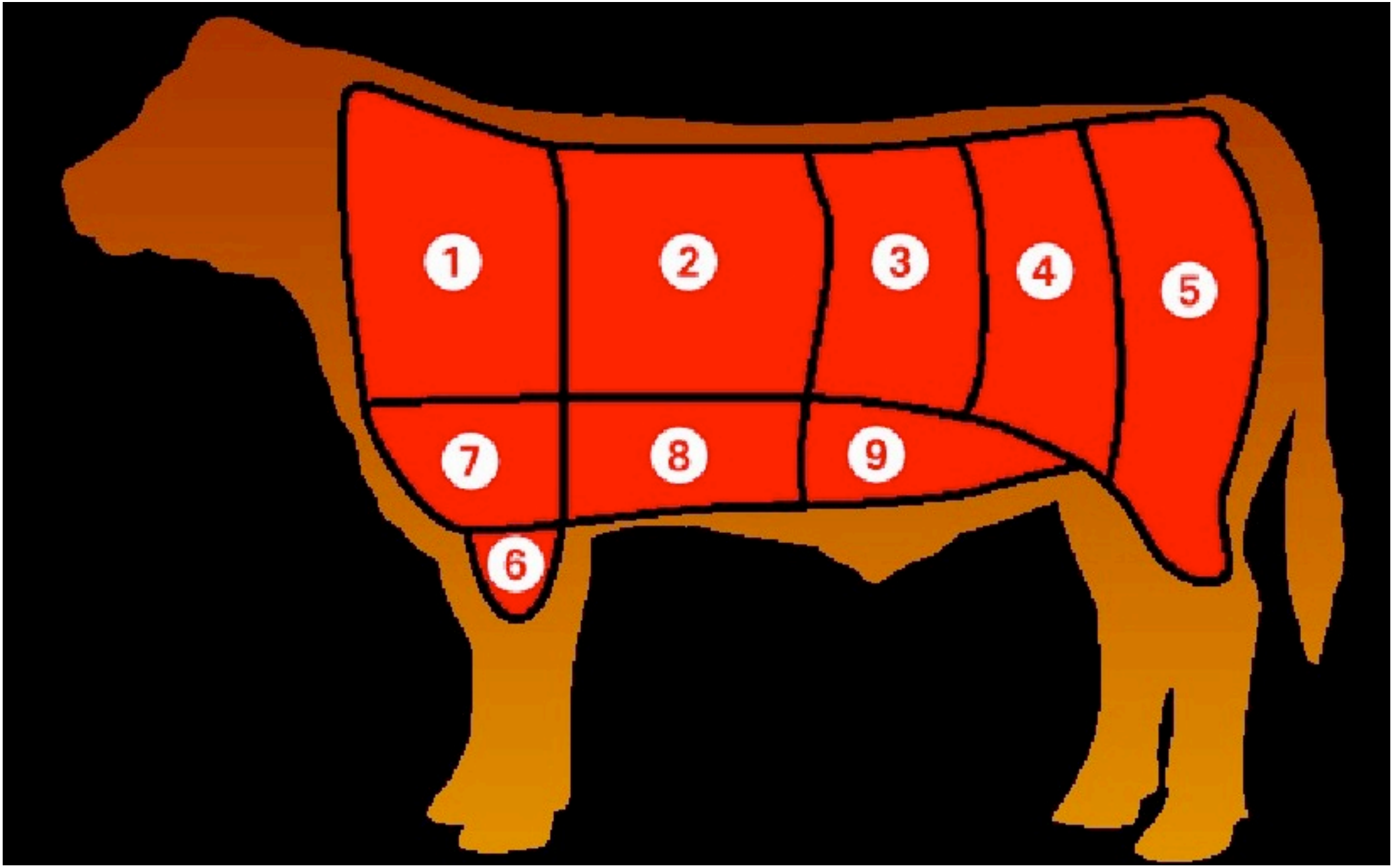


City Center

- Courtyard Bldgs
- Mansion Apt Bldgs
- Flex Bldgs
- Duplex-Quadplex Bldgs

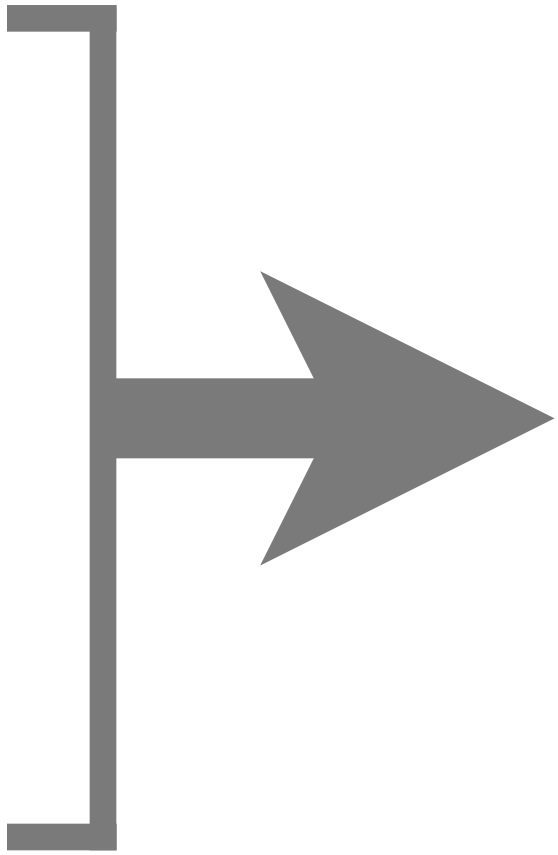
FAR and Density Approach: Quantity-Focused

Form-Based Zoning: Variety and Compatibility Focused



Key Characteristics of each Type

1. **Lot Size:** Min Needed / Max Compatible
2. **On-site open space?** Min size to be useful
3. **Building Size:** Min Needed/Max Compatible
4. **Parking location/Access**: to support context
5. **Tenant access:** to make livable
6. **Frontage options:** Flexible w/in context



Building Standards

5.10.140 VILLA STANDARDS

A. Description and Intent

1. Description. A building with the appearance of a large house, containing up to eight dwellings. The building has a central lobby that provides access to individual units. On-site open space is provided through individual patios in addition to the rear yard. The building may accommodate ground floor non-residential uses in either a live-work configuration or as solely commercial/retail space facing the primary street as allowed by the zone.

   Resultant Density: 14 to 20

2. Examples of Intended Physical Character. The following examples are illustrative of the range of physical character for the Villa type in the zones allowed by this Code.

Above: Villa with central entry to small lobby and four units facing the street. Parking is accessed by a driveway at left.

Above: Villa with a raised front yard, central entry to small lobby and several units facing the street.

Above: Villa along side street presenting a scale transition to adjacent single family houses.

Above: Villa with side driveway from street providing access to parking in rear of building site.

B. Design Standards

Diagram V.1

Diagram V.2

Villa types are subject to the following as applicable.

		T4	T4.5	T5	SD2.1
Building Site					
A	Width	80–125	80–125	65–125	80–125
B	Depth	160–175	160–175	145–200	150–200
Facade Location					
C	Front	12–20	5–15	0 or 10	10–20
D	Street Side	10–15	5–15	0 or 10	10–20
E	Side Yard	10	10	0 or 10	10
F	Rear Yard Transition	65	65–80	65–80	75–100
Building Size					
G	Building Length	60–80	60–80	60–100	60–100

Facades shall be composed of increments of 25 ft or less. Increments shall be created through projecting or recessing wall surfaces, changes in roofline and/or placement of piers and pilasters.

Facades along frontage lines as defined by the zone shall apply frontage types per Section C.3 of the zone.

Along any frontage, the building shall include a decorative parapet and/or a pitched roof with a visible eave from the sidewalk.

Buildings on corner sites shall be designed with two facades of equal architectural expression.

Building entries for non-residential units shall be at grade along the adjacent sidewalk. Building entries for dwellings shall be raised 1.5 ft from the adjacent sidewalk grade to provide some privacy for occupants. Where ramps are required, their design shall be per the ADA requirements and the frontage requirements in Section C.3 of the zone.

PE Parking access driveways and spaces shall be located per Section C.2 of the zone standards.

Where ground floor residential is allowed, first floor living areas rather than sleeping or service rooms shall be oriented toward the street. Where the zone allows non-residential activity, retail or office space rather than service rooms shall be oriented toward the street.

The main entrance to each unit shall be from a common lobby within the main facade and accessed directly from the street.

Units along side streets may enclose private open space only through the Walled Yard type (5.20.100).

In T5, zero interior sideyard setback allowed if natural light provided to dwellings along the interior side of the building site. Otherwise, minimum 10 feet required.

Articulating, Blending Densities through Building Types

6

Shallow Site: busy corridor, houses behind

475 X 110
= 52,250 SQ FT

1.20 ACRES

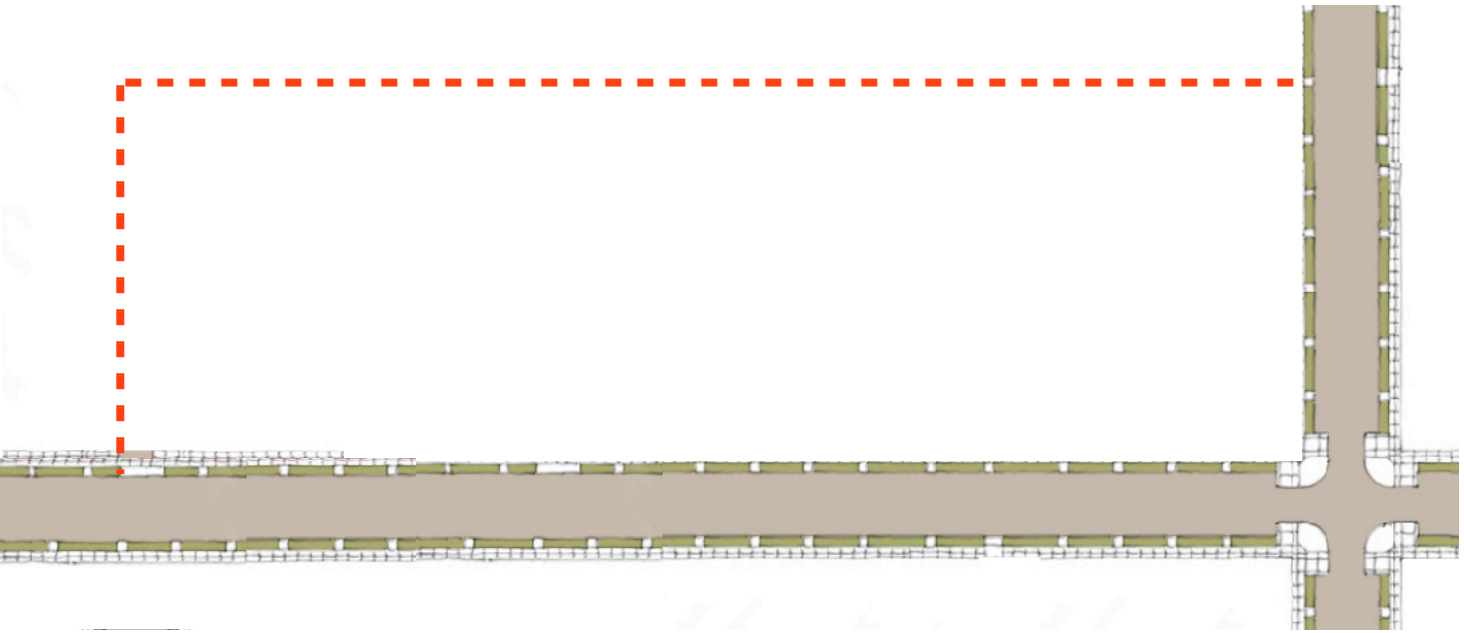
Large Site: along corridor houses behind

700 X 900
= 630,000 SQ FT

14.46 ACRES

Examples

Articulating, Blending Densities through Building Types



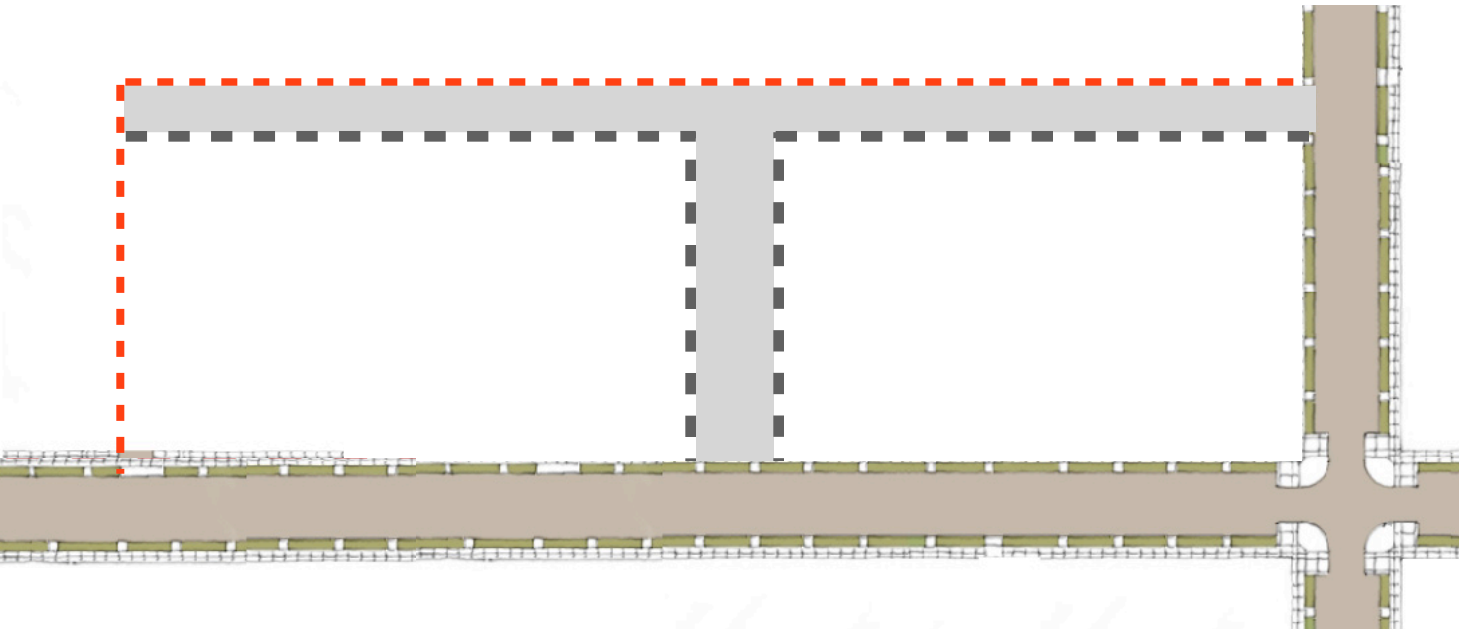
Shallow Site: busy corridor, houses behind

475 X 110
= 52,250 SQ FT

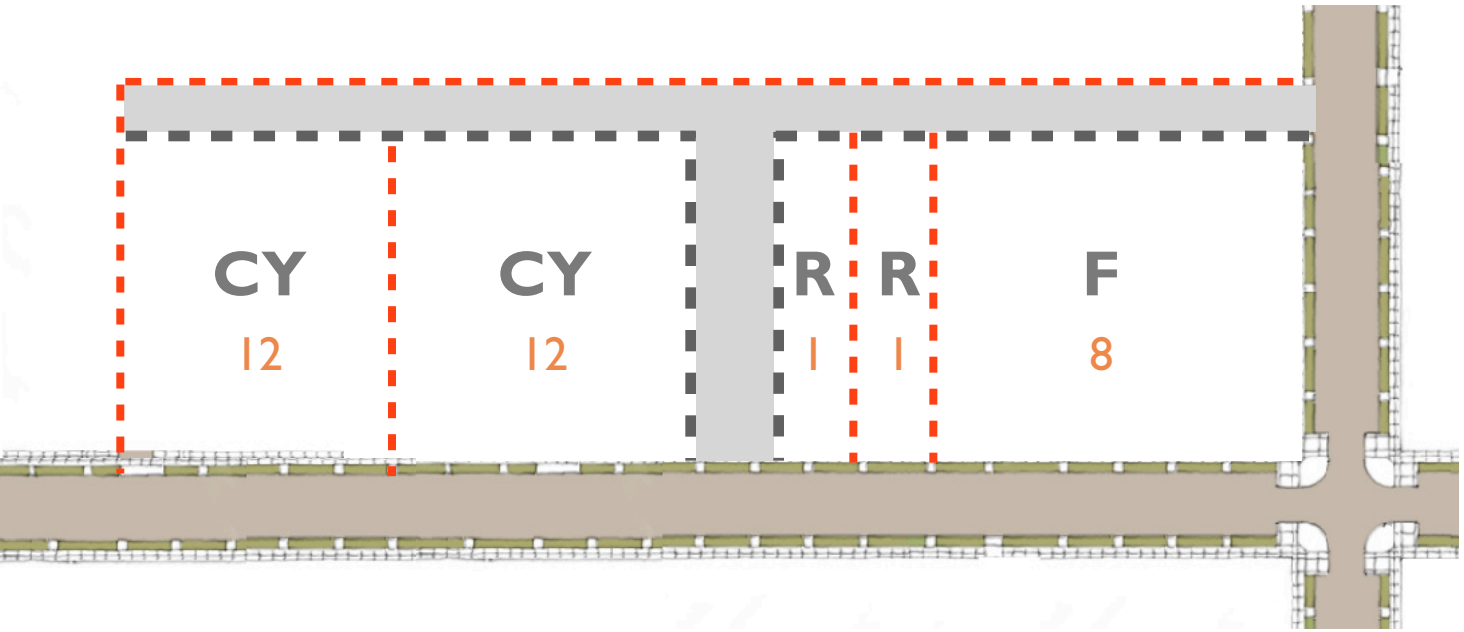
1.20 ACRES

Articulating, Blending Densities through Building Types

Make Blocks



Articulating, Blending Densities through Building Types



Select types and Lot the blocks

=34 UNITS

32 DUA AGGREGATE

Articulating, Blending Densities through Building Types

24 COURTYARD PODIUM UNITS

2 ROWHOUSE UNITS

8 UPPER STORY UNITS + 7,000 SF GR FLR SPACE

Add Types

=34 UNITS

32 DUA AGGREGATE

Articulating, Blending Densities through Building Types

6 MANSION APT UNITS

8 ROWHOUSE UNITS

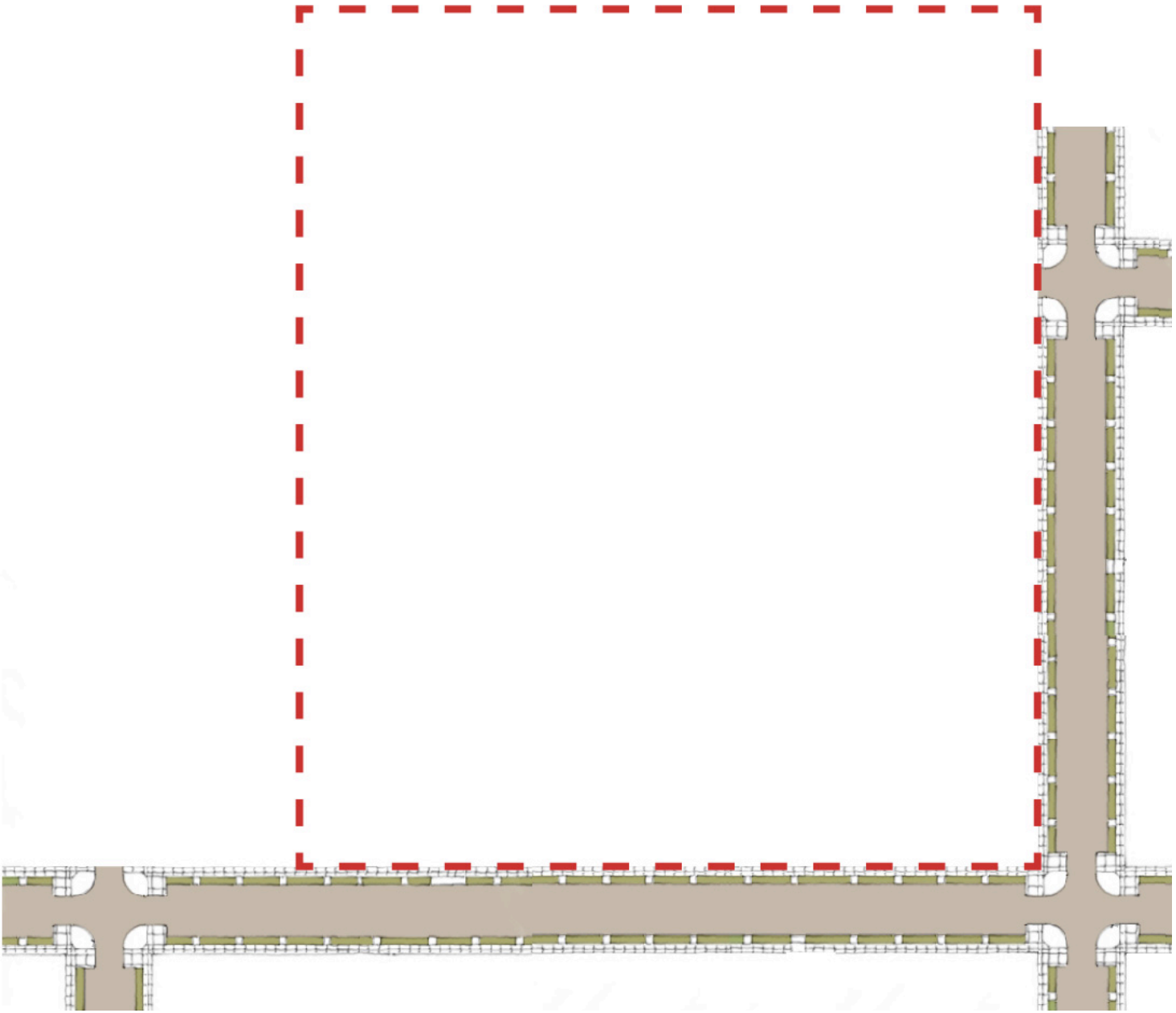
8 UPPER STORY UNITS + 7,000 SF GR FLR SPACE

or, all surface parking approach

=22 UNITS

18.3 DUA AGGREGATE

Articulating, Blending Densities through Building Types



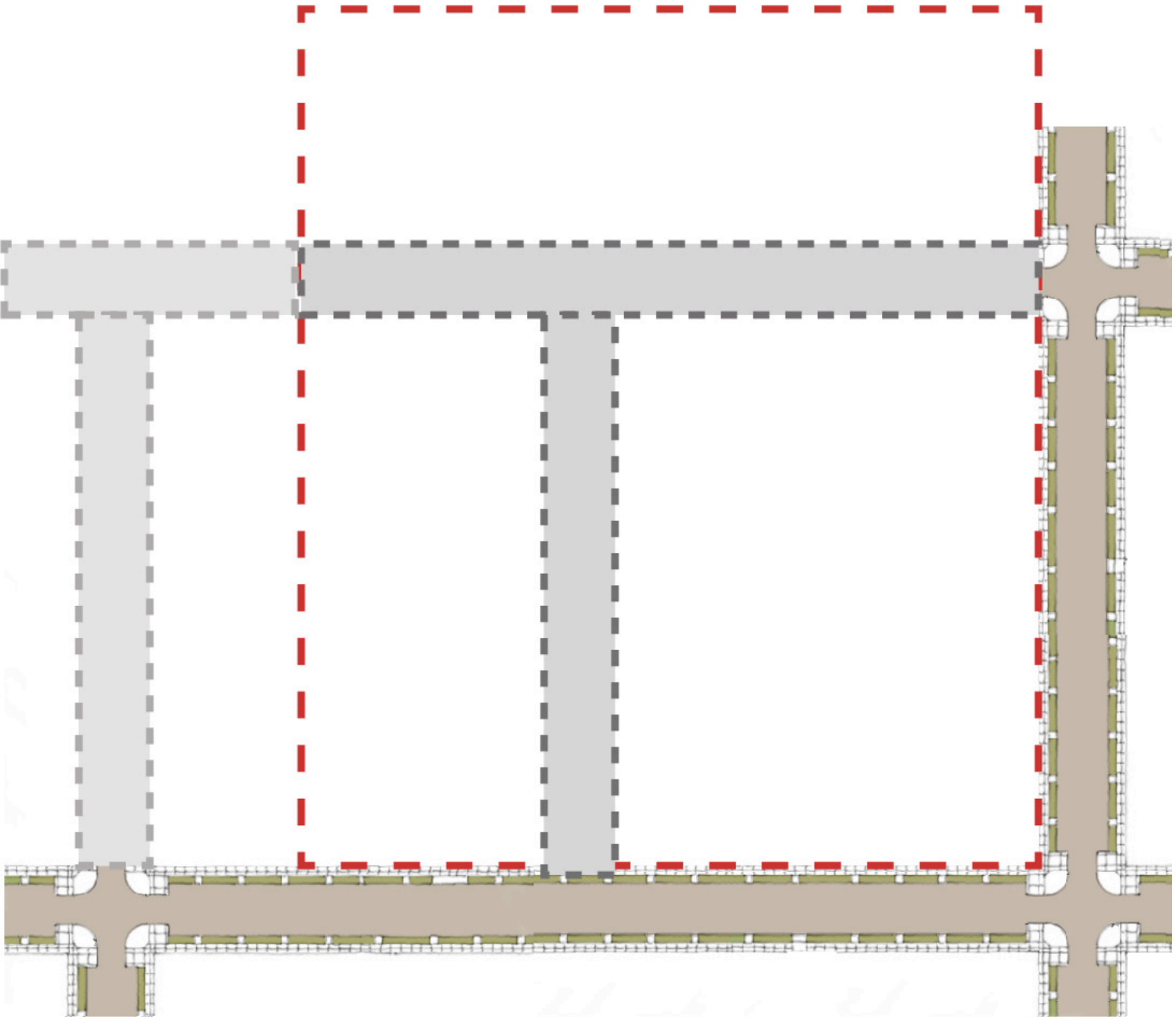
Large Site

700 X 900
= 630,000 SQ FT

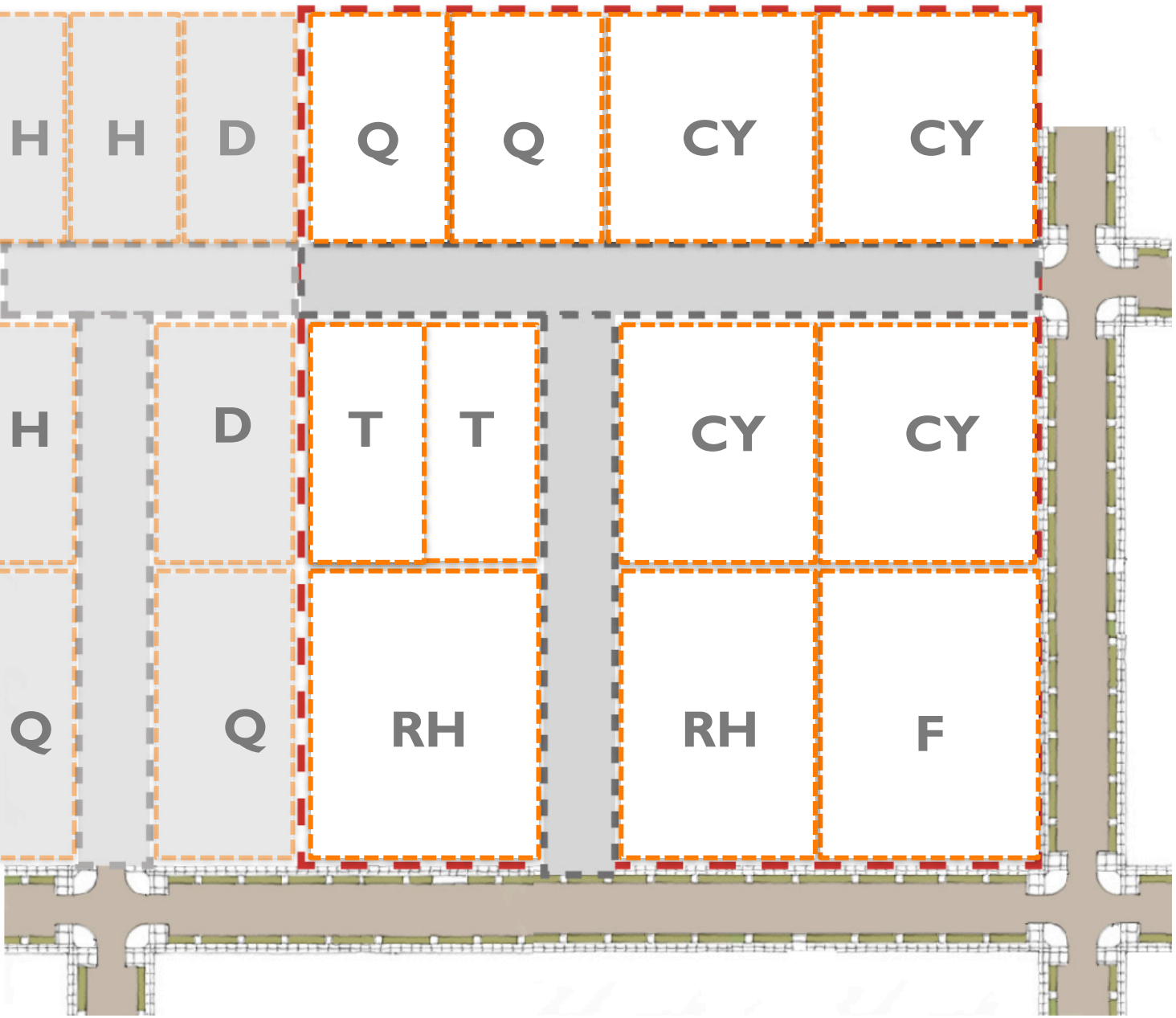
14.46 ACRES

Articulating, Blending Densities through Building Types

Make Blocks



Articulating, Blending Densities through Building Types

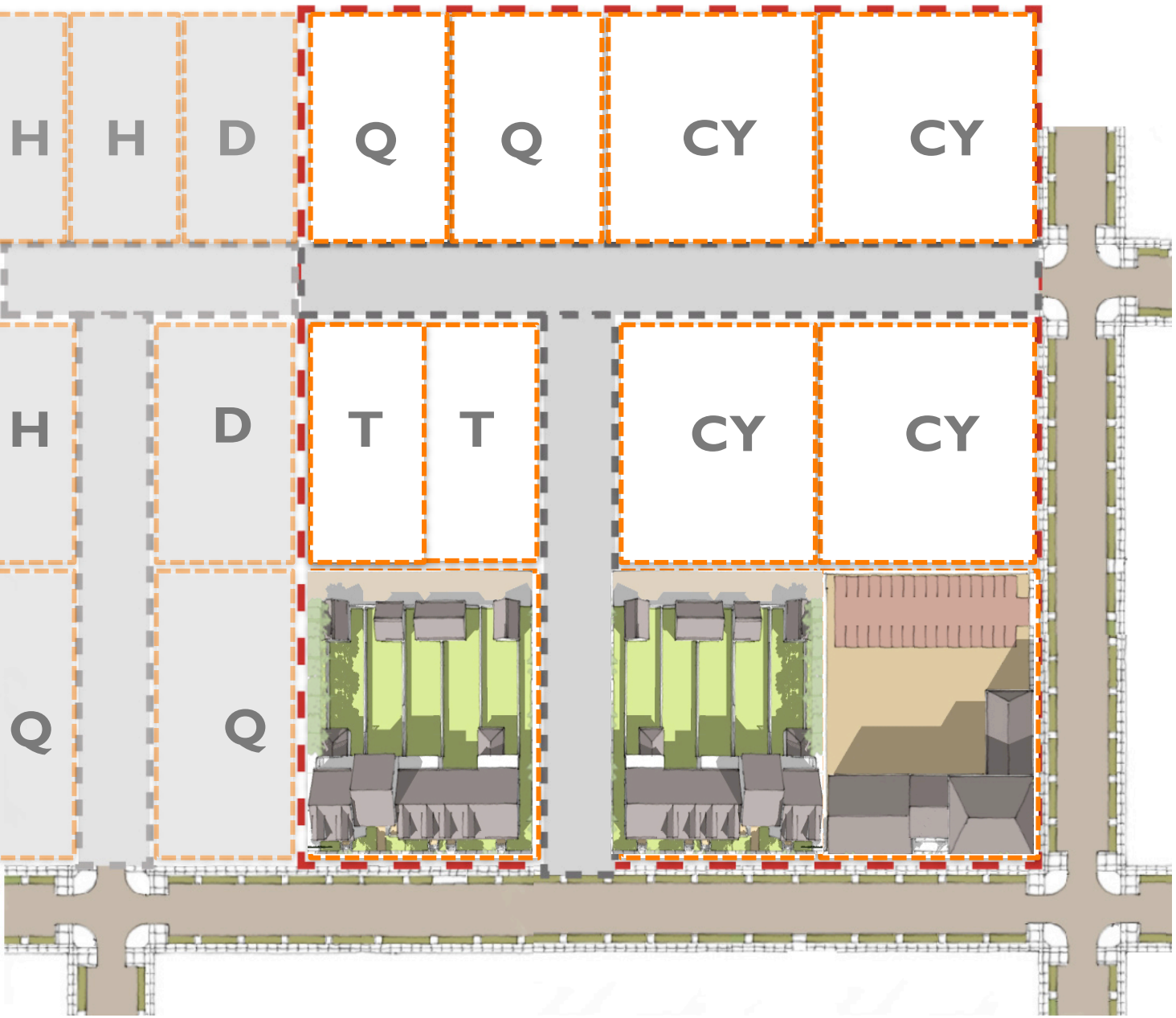


Select types and lot each block

=121 UNITS

8.36 DUA AGGREGATE

Articulating, Blending Densities through Building Types



Add

+1 Flex Bldg

+2 Rowhouse Bldgs

Articulating, Blending Densities through Building Types

Add

+1 Flex Bldg

+2 Rowhouse Bldgs

+2 Courtyard Bldgs

+2 Triplexes

Articulating, Blending Densities through Building Types

Add

+1 Flex Bldg

+2 Rowhouse Bldgs

+2 Courtyard Bldgs

+2 Triplexes

+2 Courtyard Bldgs

+2 Quadplexes

Articulating, Blending Densities through Building Types

LARGE SITE

700 X 900
= 630,000 SQ FT
14.46 ACRES

121 units
5 Bldg Types

8.36 DUA AGGREGATE

Neighborhood Compatible

Classifying and Clarifying Different Approaches

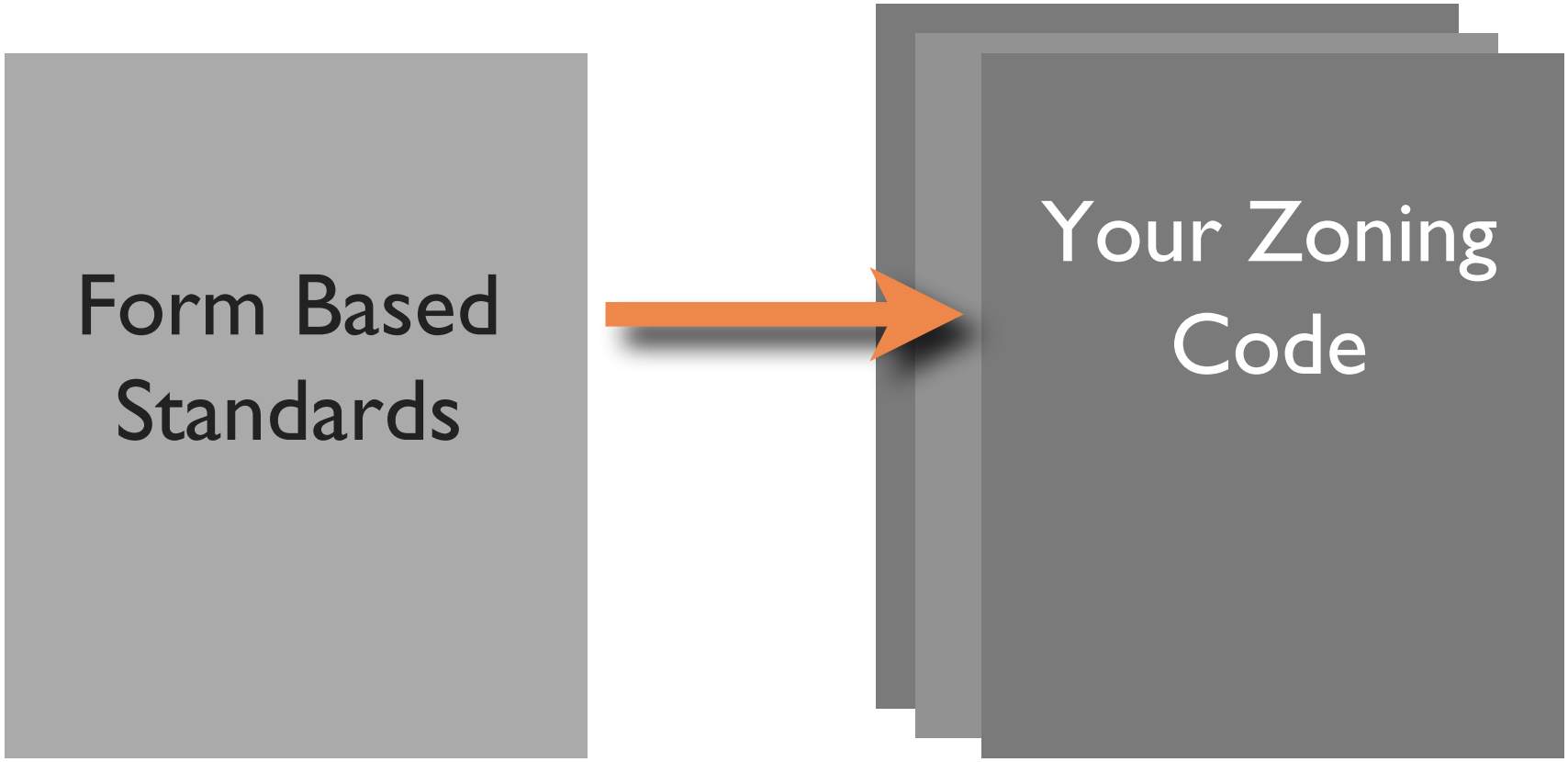
MORE COMPREHENSIVE & EFFECTIVE ---------- **LESS** COMPREHENSIVE & EFFECTIVE

	Typical Approaches to Zoning Urban Form (from least to most effective)	What Should this Approach be Called?	Organizing Principle	New Components Created and Included	Is the Overall Code Reorganized for Usability?	Likely Cost Range	Considerations for this Approach
	1. Adding graphics to a Euclidean, use-based code	Graphics-Based Code	Use	Primarily additional graphics and tables, content has minor changes only	Not in this example	Low; Primarily because it is a graphic design-usability exercise only	This is completely ineffective and should be avoided. This is what you will often get if your budget is too low for a true FBC: Will look good, but will not produce predictable results. Does not address obstacles for good development or process-related issues inherent in most zoning codes.
	2. Adding design guidelines/ site planning guidelines to a Euclidean, use-based code	Design Guidelines or Design Standards	Use	Components similar to FBC components may be created, but they do not replace the code so they do not need to be as carefully vetted and many times create conflicts within the zoning code	No	Low; Primarily because it does not address the problems with underlying zoning	Mostly ineffective due to typical issue inherent in existing code that are not addressed and may even contradict zoning. Adding another layer of regulations that confuses intent and negatively impacts usability and administration
	3. Adding mixed use zones to to a Euclidean, use-based code	Targeted Mixed Use Zone Application	Use typically, sometimes form	New base zones and zone standards only	No	Low; Primarily because this approach entales crating only new base zones	Effectiveness depends highly on quality and clarity of existing code and development review process. If administration and the code document structure is good, and detailed visioning is completed, and the mixed use zones are not over-simplified this can begin to show good results. Existing parking, use tables, landscape standards, etc. must be vetted
	4. Adding graphics, reorganizing code, cleaning up administration, and minor changes to development standards	Code Clean Up and Re-organization	Use	Mostly just translating existing information into tables and creating drawings to support existing code information	Yes	Medium to high depending on scale of city or county	Addresses many of the issues above, but ultimately still has use as an organizing principle, which limits the effectiveness of the code and stops it short of being an FBC. Does not typically complete documentation and analysis of place to extract the DNA that becomes the basis for the code but rather uses existing zone standards as starting point and makes changes to those
Form-Based Codes	**5. Optional Form-Based Code overlay**	Form-Based Code Overlay	Form	All typical FBC elements included, process rethought for FBC application	No	Low to Medium, depending primarily on extent of visioning completed	Administration, parking, landscape, and all other elements within code must be vetted and coordinated with intent of the FBC and potentially included in the FBc and replaced when the overlay is triggered
Form-Based Codes	**6. Integrating a complete Form-Based Code within a pre-existing zoning code**	Parallel Form-Based Code	Form for FBC section, use for the rest of the pre-existing code	All typical FBC elements included, process and all general standards (parking, landscaping, etc.) rethought for FBC application	Sometimes	Medium; Primarily due to the fact that a complete, parallel code is being created to replace the exising code in targetted areas	Administration, parking, landscape, and all other elements within code must be vetted and coordinated with intent of the FBC Division. If you are doing a complete code rewrite and you choose this approach, you are writing two complete, parallel code documents which is not a good use of resources. This approach is still sending a message that the default is drivable suburban development and that FBCs are the exception
Form-Based Codes	**7. Using Form as an organizing principle for the entire zoning code and using Form-Based Code components as the driver for your Table of Contents**	Citywide Form-Based Code	Form	All typical FBC elements included, process and all general standards (parking, landscaping, etc.) rethought for FBC application, admin and procedures, variances, etc. are all rethought to support the FBC	Yes	High; Slightly higher than #4. Due to charrettes for FBC Focus Areas, and extensive documentation and analysis phase completed, and that all standards are carefully vette	In this approach, the structure of the entire zoning code is completely rethought, a new operating system is established, and thus the entire table of contents of code document is structured with a form-first philosophy. Every last bit of content from the pre-existing code is vetted for it applicability to the form-first operating system before it is transferred so that it does not compromise the intent. This approach is perfect for a city that has made a strong commitment in its city policies to promote smarter, more sustainable growth. Let Euclidean zoning regulate drivable suburban contexts, and the FBC regulate walkable urban contexts. It is called citywide Form-Based Code not because the entire city has Form-Based Coding applied, but rather the entire city has been assessed, FBC aplied to where it make sense, and the FBC application can easily spread

Dan Parolek article in *Zoning Practice* May 2013

7

Different Approaches



"Using Conventional Zoning to protect and move your community forward is like playing the piano with your palms instead of your fingers."

tony.perez@opticosdesign.com

805-603-6671